

[illegible]

100-443887-100

FITC- α p96

FLTC-9696

FIG. 1a

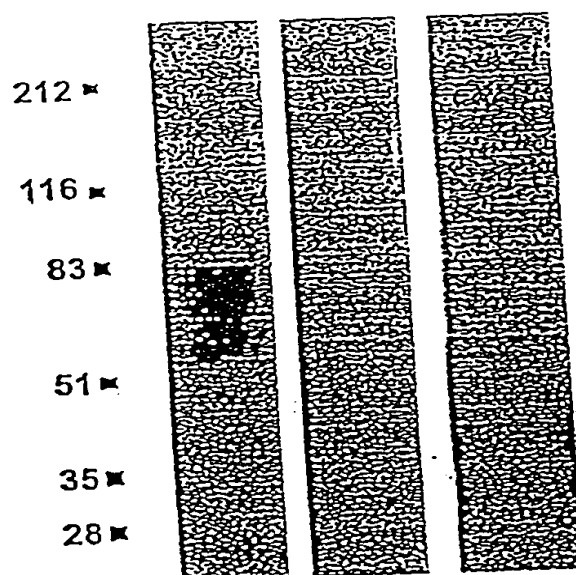
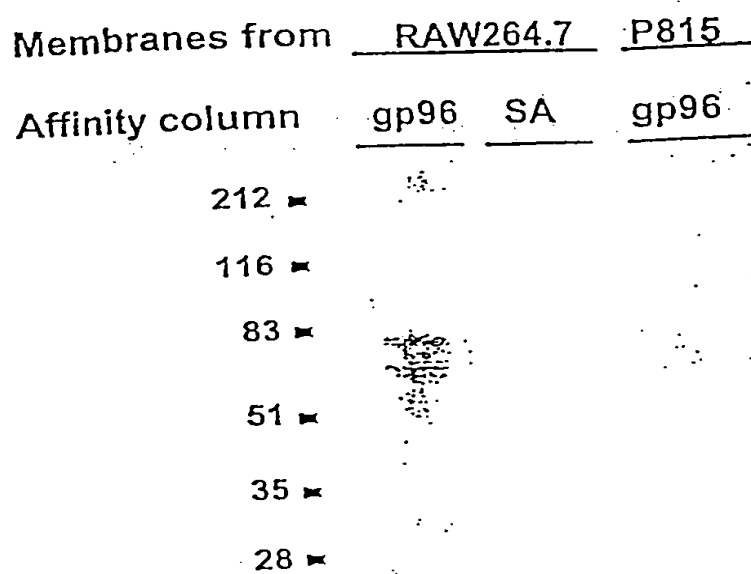


FIG. 1b

	Cells	MO	MO	MO	P815
^{125}I -SASD-gp96	+	+	+	+	+
UV	+	-	+	+	+
2-ME	+	+	-	+	+

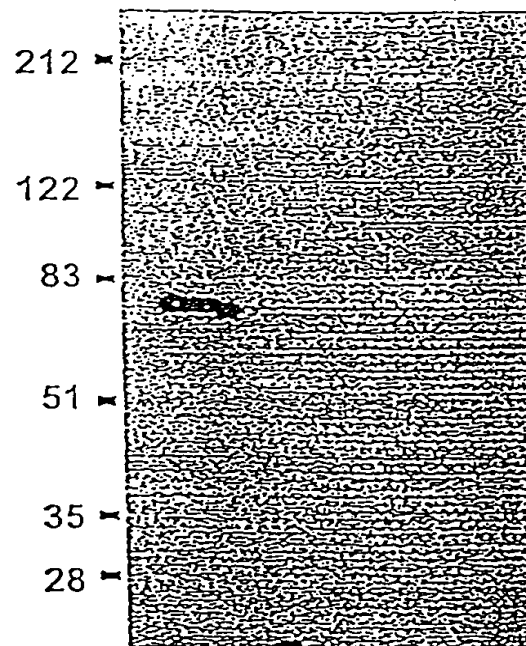


FIG. 1c

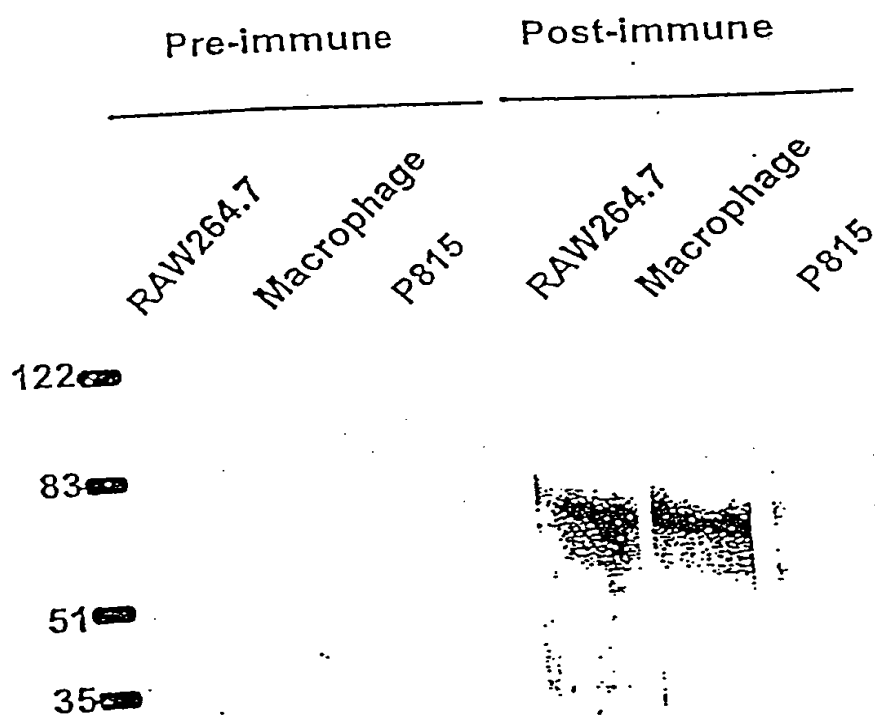


FIG. 2a

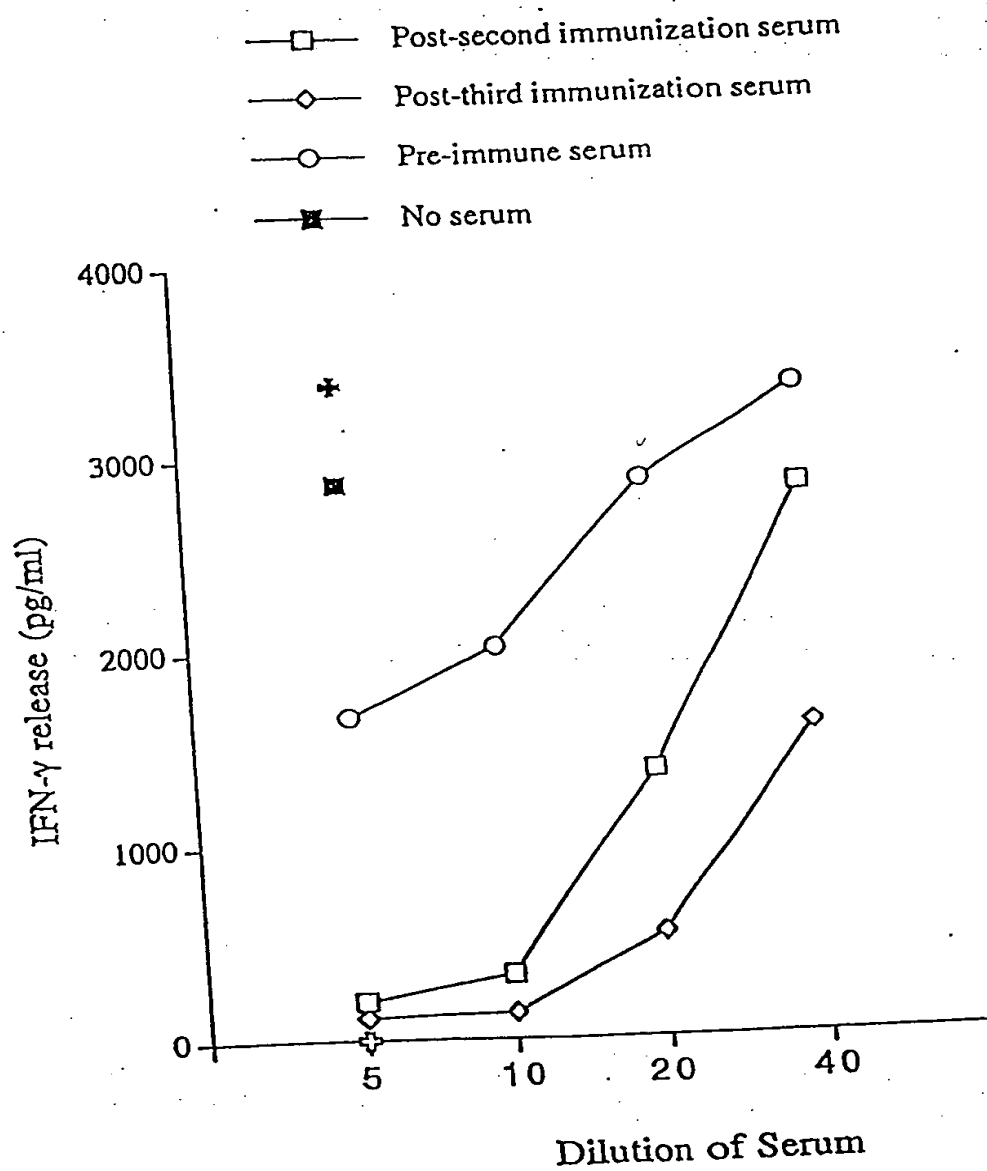


FIG. 2b

Seq #	b	y	+1
G 1	58.1	-	10
G 2	115.1	1095.2	9
A 3	186.2	1038.2	8
L 4	299.3	967.1	7
H 5	436.5	853.9	6
I 6	549.6	716.8	5
Y 7	712.8	603.6	4
H 8	850.0	440.5	3
Q 9	978.1	303.3	2
R 10	-	175.2	1

FIG. 3a

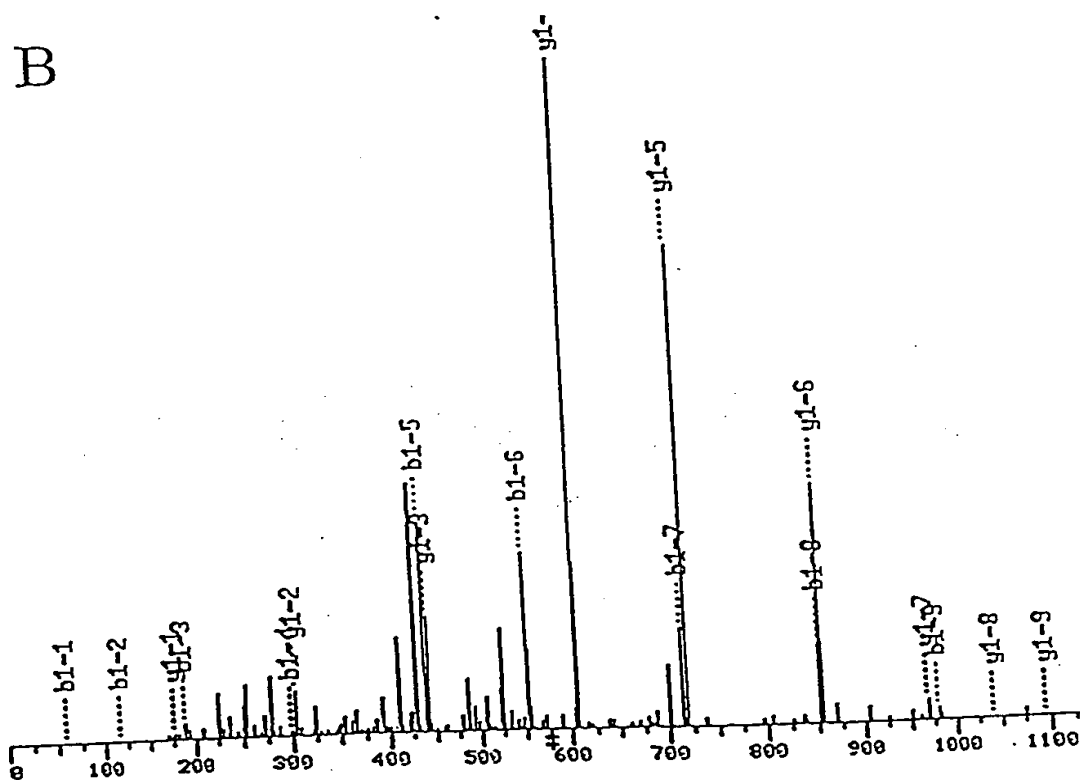


FIG. 3b

FIG. 3c

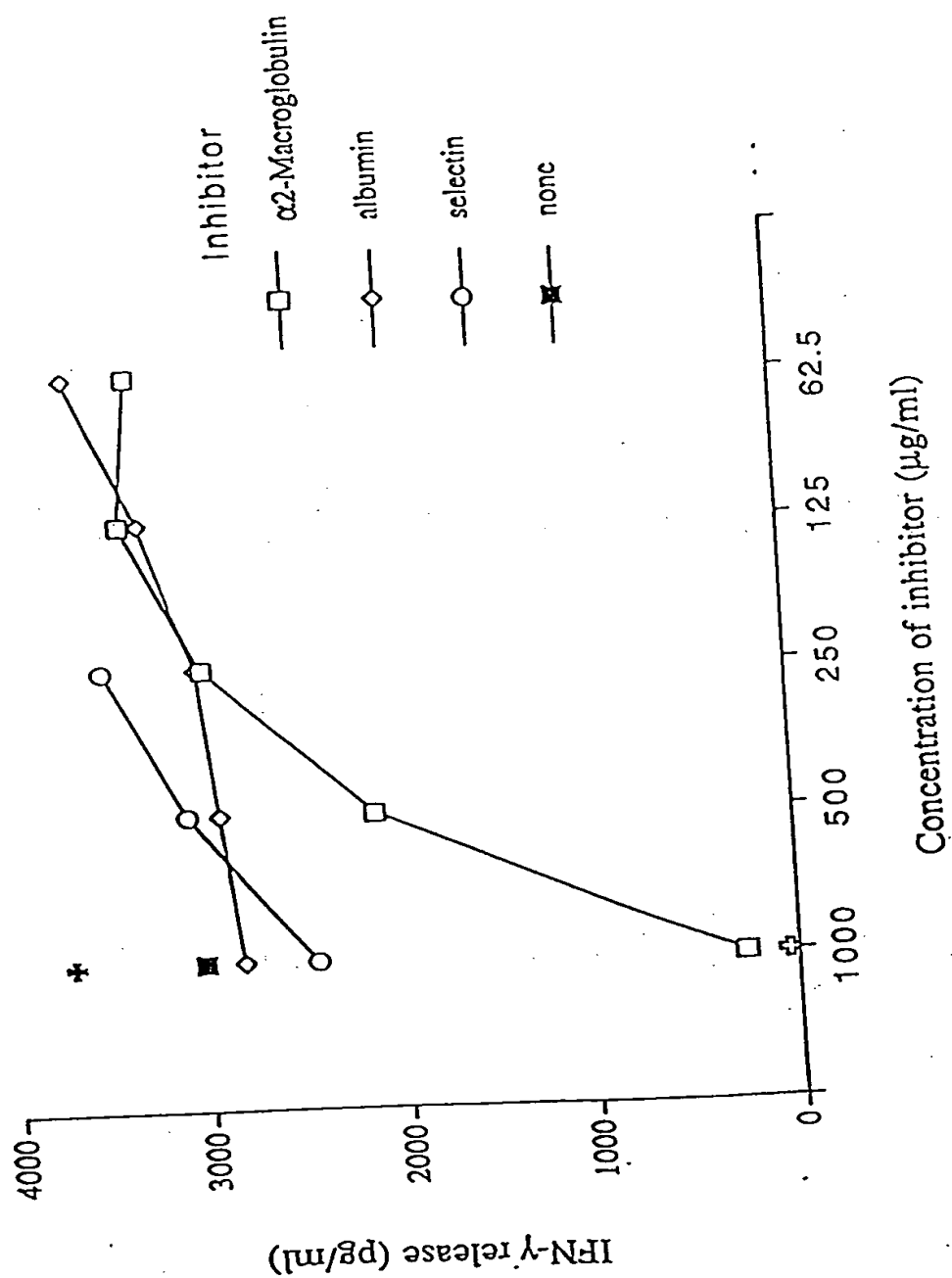


FIG. 4

Table 1. Specific binding of HSPs and α_2 -macroglobulin to primary cultures and cell lines of several histological origins*

Cells	Cell type	Haplotype	**% cells binding with FITC-labeled:				
			α_2 M	gp96	hsp70	hsp90	SA
B16	Melanoma	<i>b</i>	0.1	3.5	6.4	8.0	0.3
CT26	Carcinoma	<i>d</i>	N/D	0.3	3.1	5.5	0.4
YAC-1	Lymphoma	<i>b</i>	0.1	3.1	23.0	5.0	0.2
EL4	T cell thymoma	<i>b</i>	0.1	2.9	3.0	6.6	1.0
Meth A	Sarcoma	<i>d</i>	0.1	0.1	1.5	0.9	0.5
PS-C3H	Fibrosarcoma	<i>k</i>	0.1	0.1	2.0	0.3	0.3
UV6139	Sarcoma	<i>k</i>	11	0.0	0.7	0.2	1.5
P815	Mastocytoma	<i>d</i>	0.1	1.1	1.7	0.7	0.2
Peritoneal cells	Macrophage	<i>d</i>	90	97	82	82	11
BM-DCs	Dendritic cells	<i>b</i> and <i>d</i>	+++ [#]	+++	+++	+++	-
RAW264.7 [*]	Macrophage	<i>d</i>	76	82	85	90	8.0
RAW309Cr.1 [*]	Macrophage	<i>b</i> x <i>d</i>	0.1	0.1	0.1	0.1	0.1

FIG. 5

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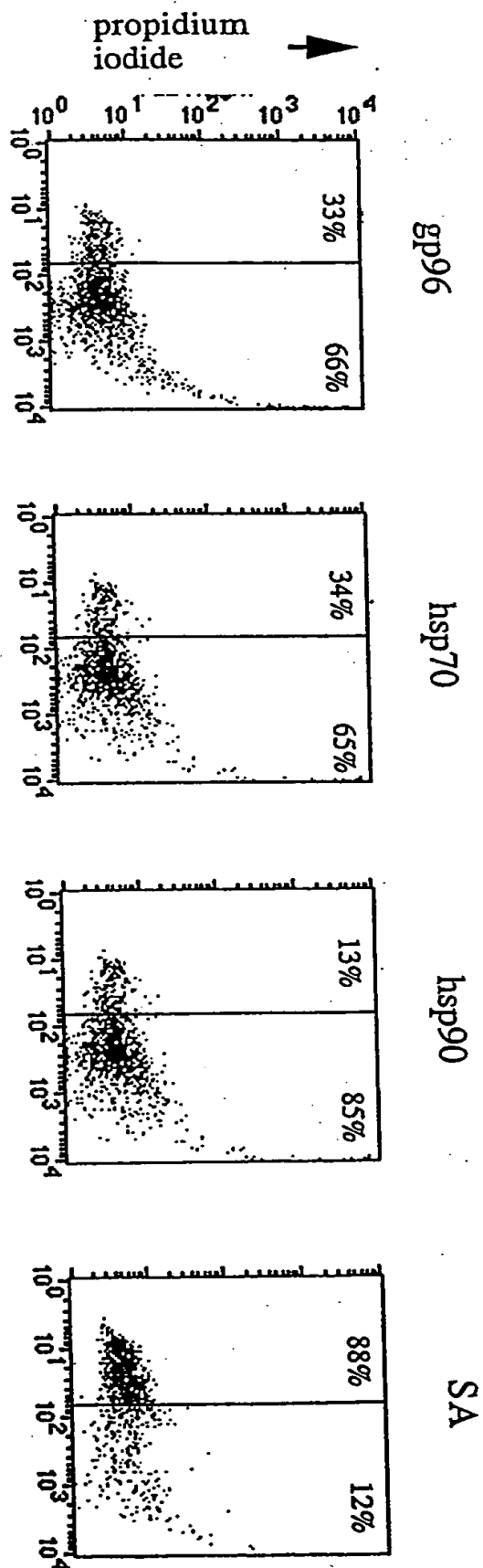


FIG. 6A

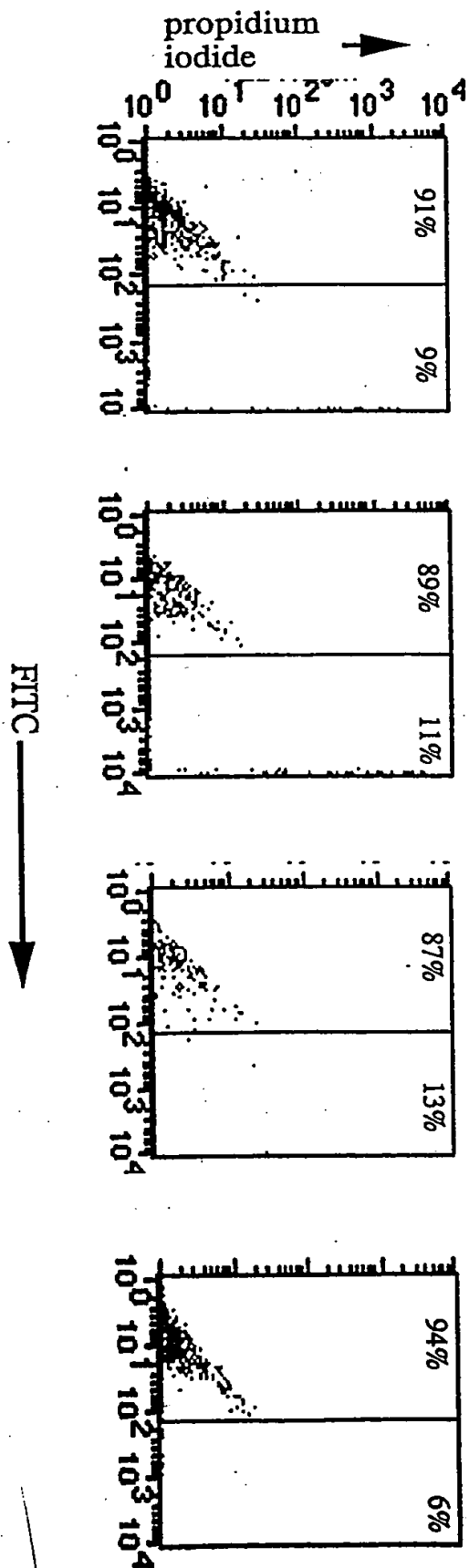


FIG. 6B

03750376 422800

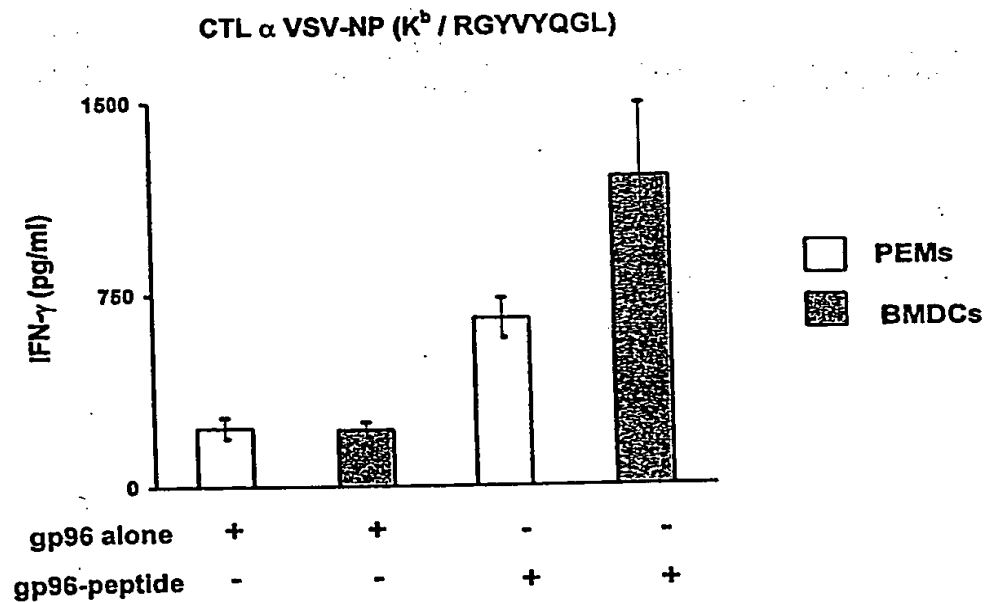


FIG. 7A

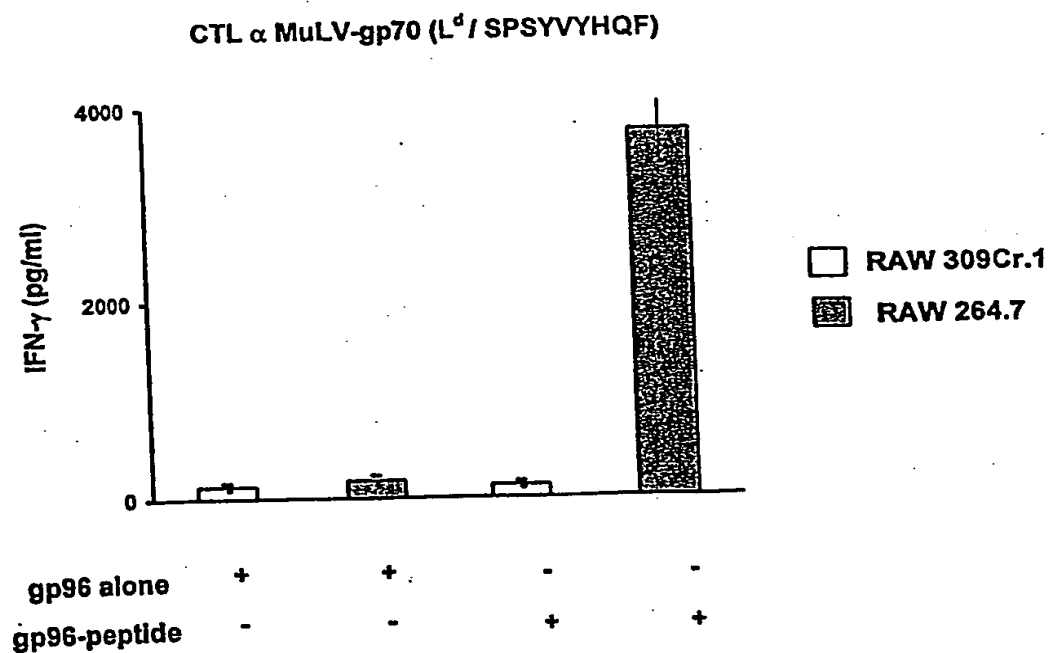


FIG. 7B

CTL α MuLV-gp70 (L^d/SPSYVYHQF)
APC : RAW 264.7

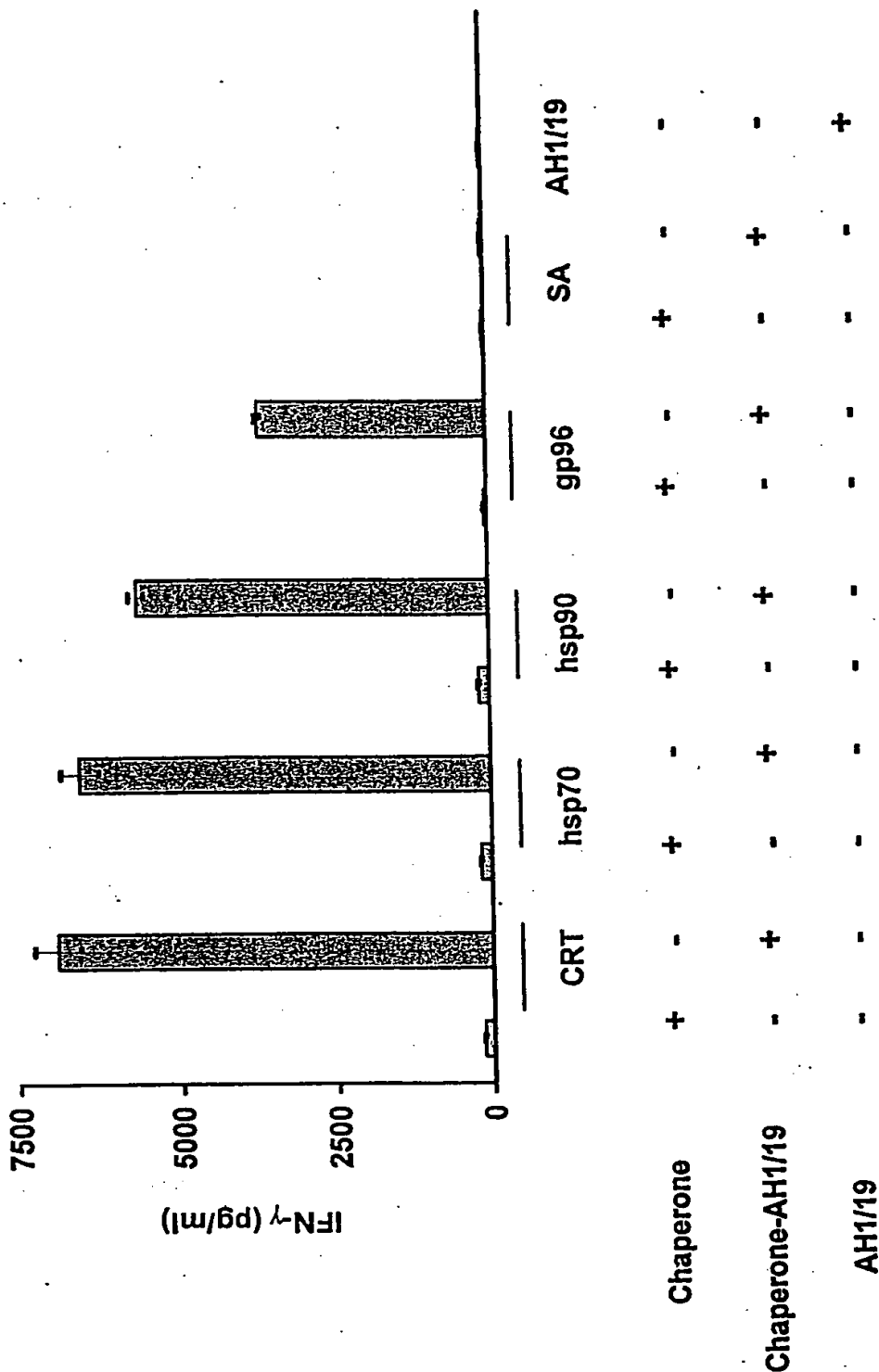


FIG. 8

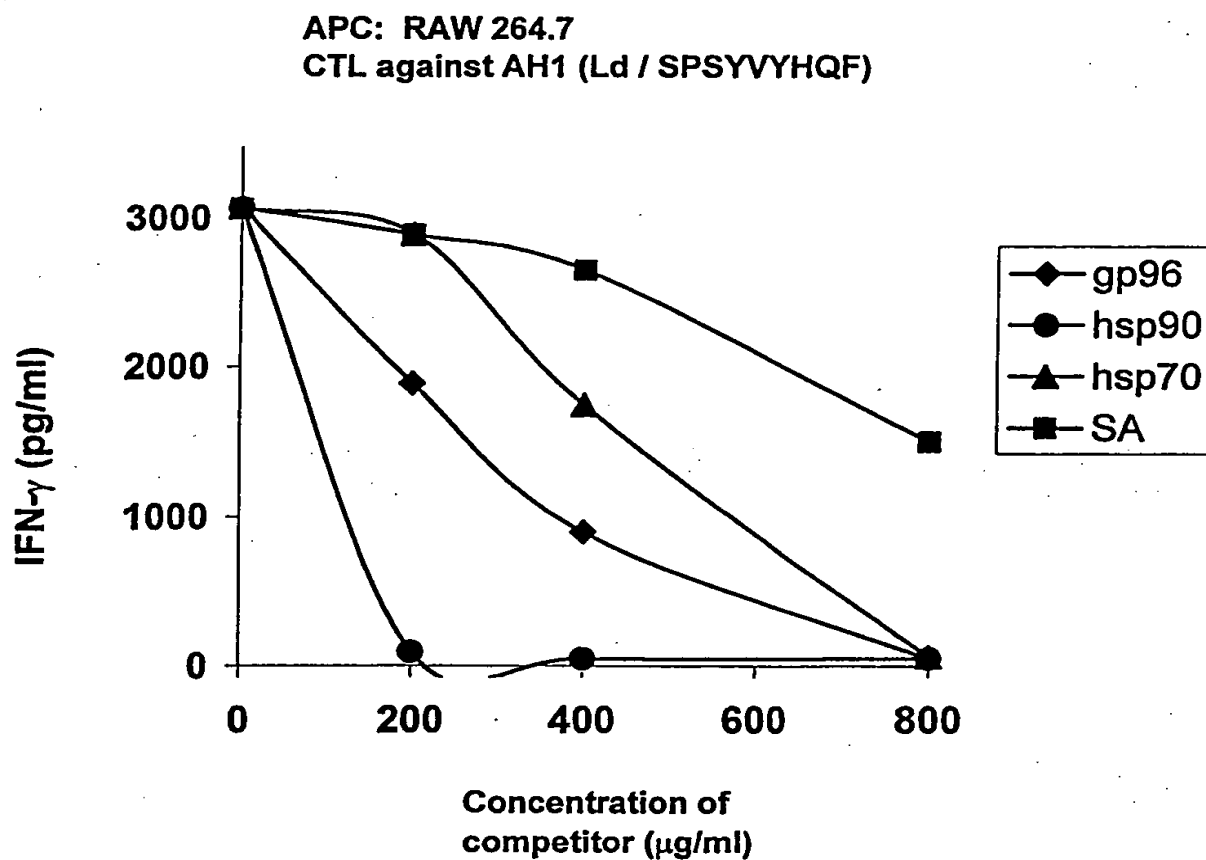


FIG. 9A

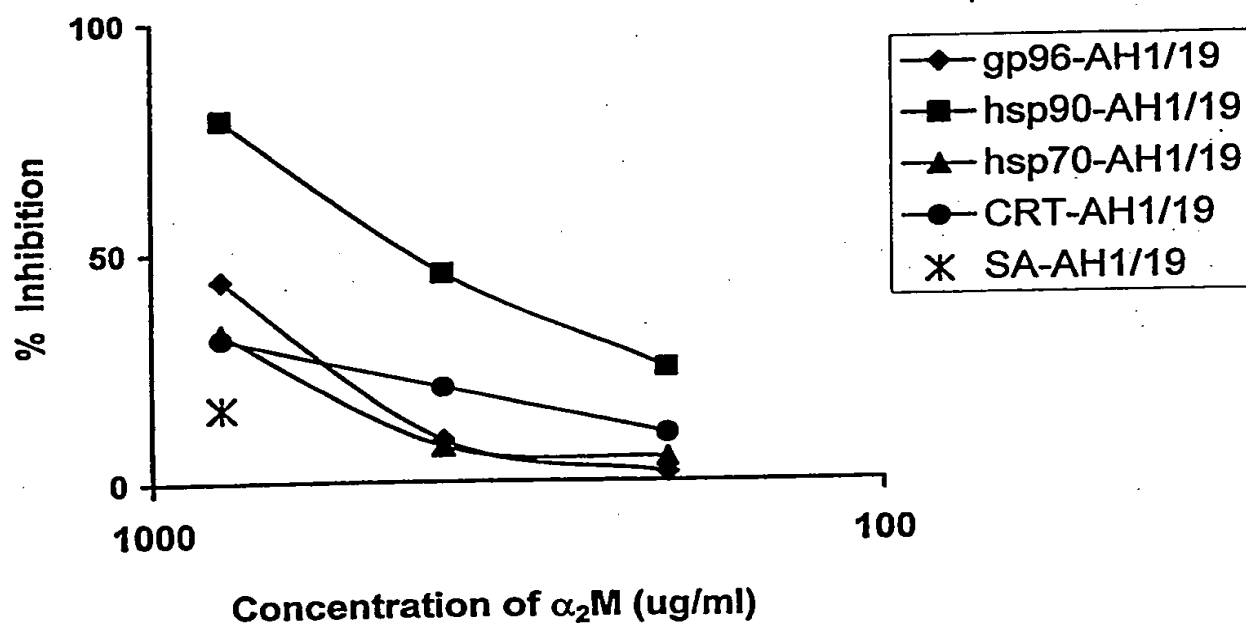


FIG. 9B

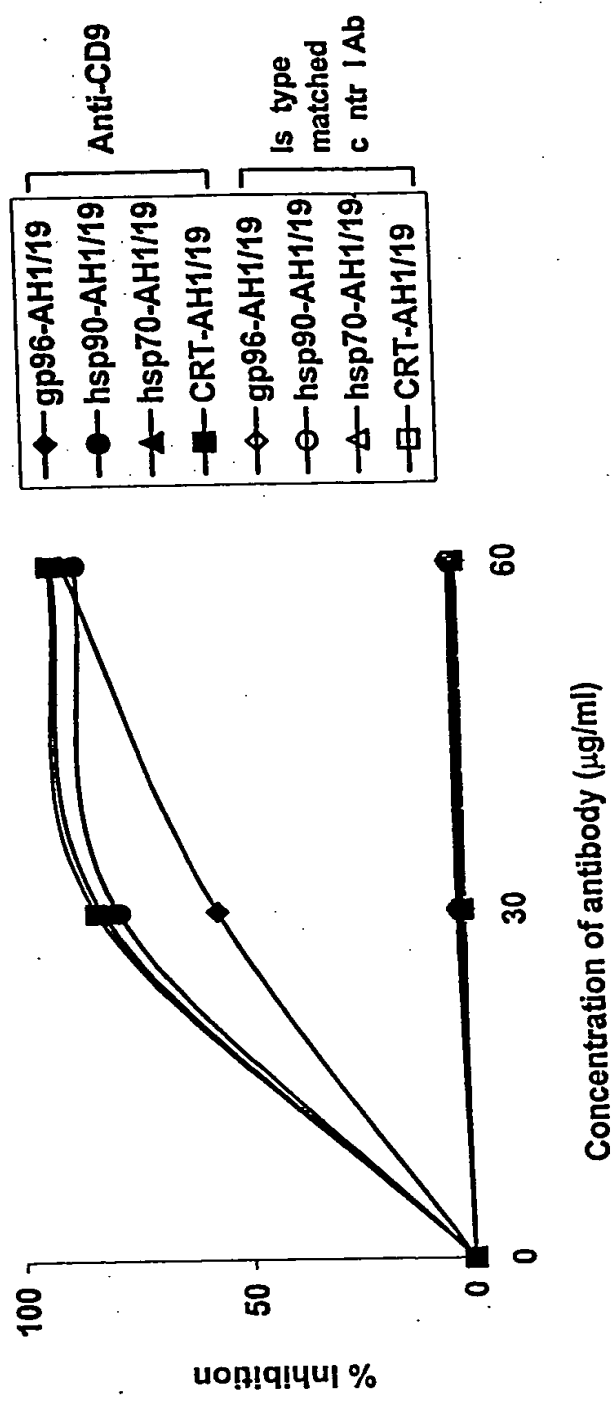


FIG. 9C

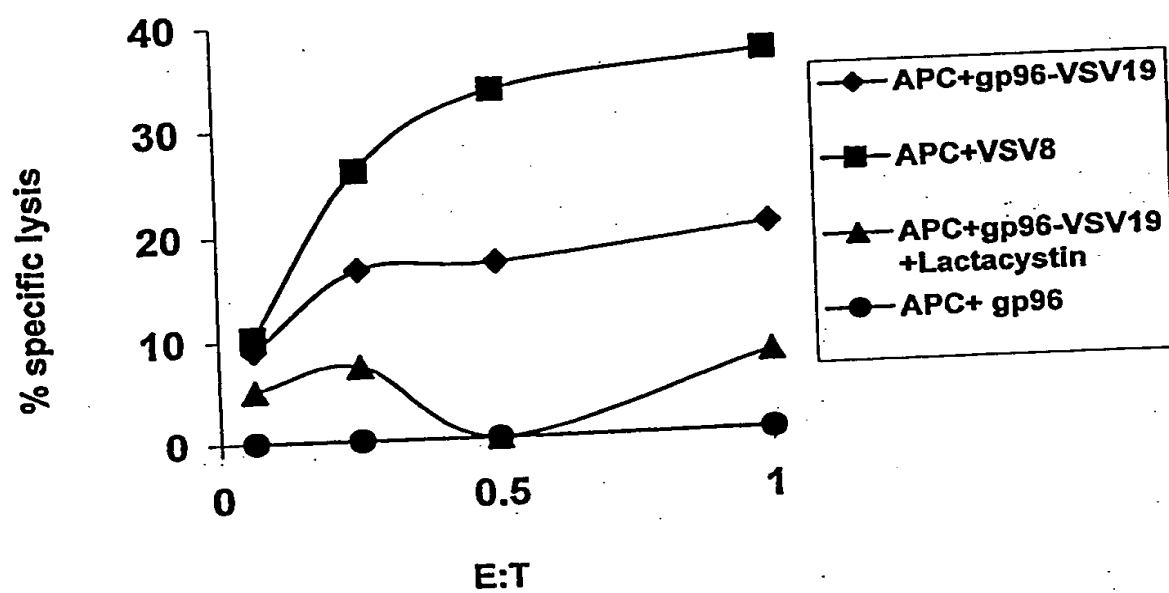


FIG. 10A

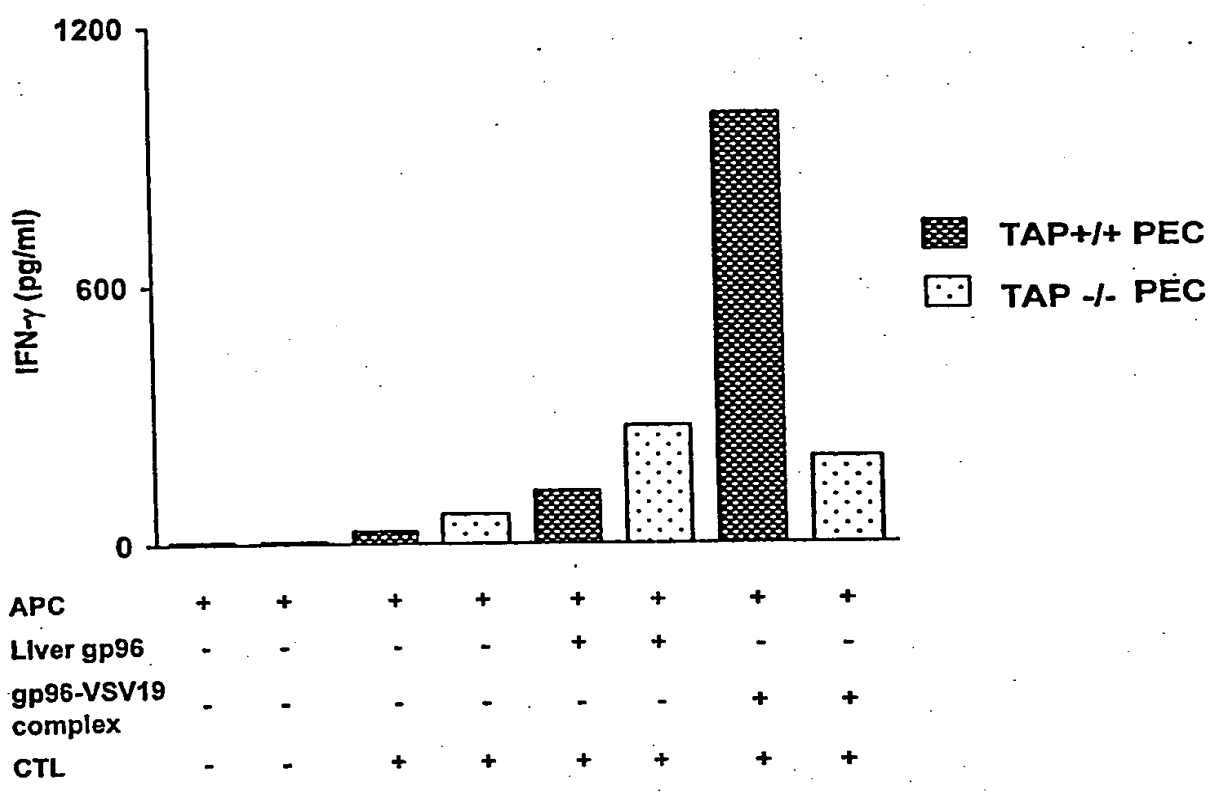


FIG. 10B

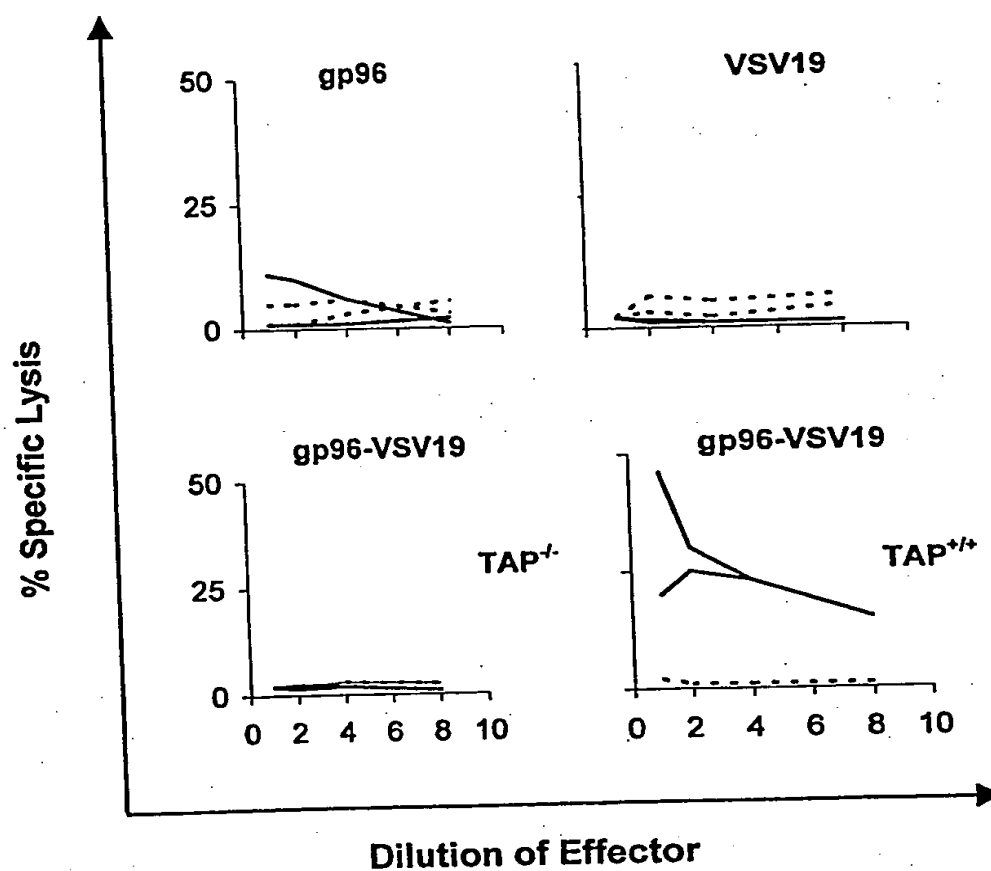


FIG. 10C

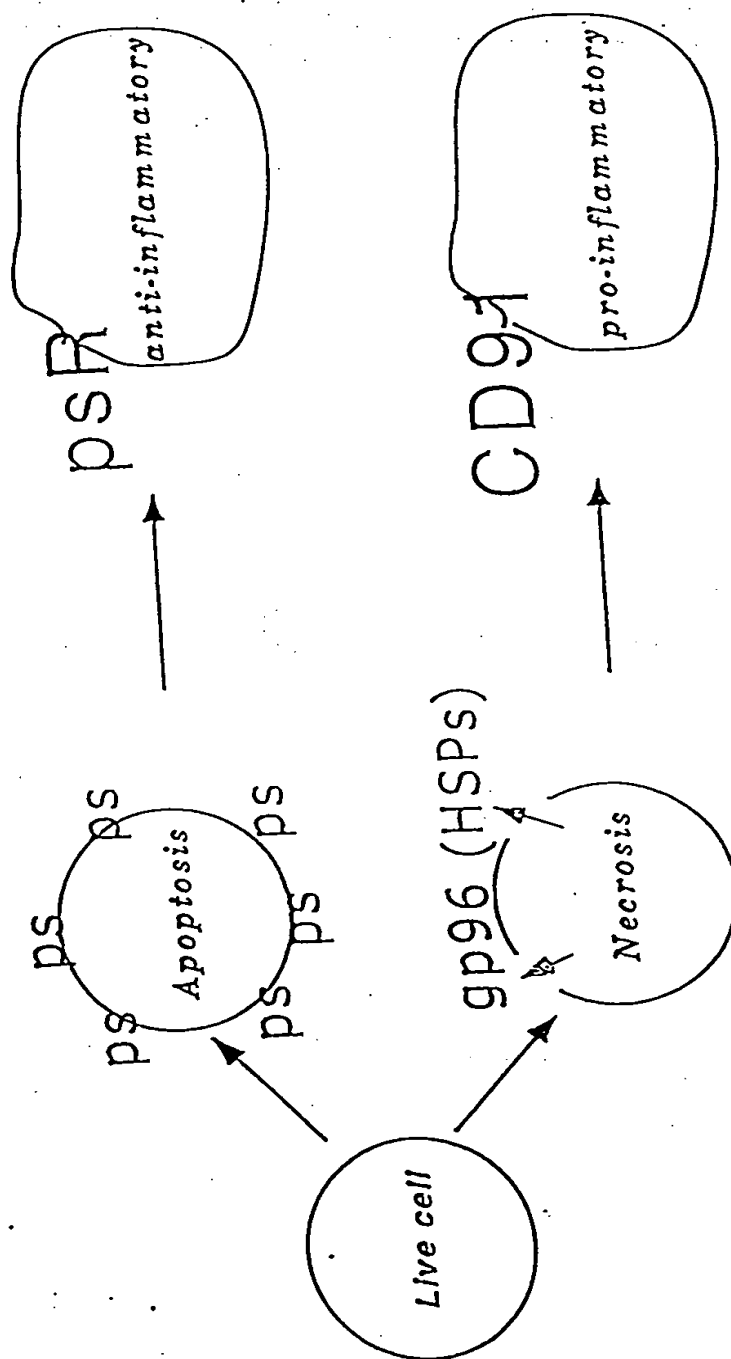


FIG. 11

CGCTGCTCCC	CGCCAGTGCA	CTGAGGAGGC	GGAAACGGGG	GAGCCCCCTAG	TGCTCCATCA	60										
GGCCCCCTACC	AAGGCACCCC	CATCGGGTCC	ACGCCCCCCA	CCCCCACC	CGCCTCCTCC	120										
CAATTGTGCA	TTTTTGAGC	CGGAGTCGGC	TCCGAGATGG	GGCTGTGAGC	TTCGCCCTGG	180										
GAGGGGGAGA	GGAGCGAGGA	GTAAAGCAGG	GGTGAAGGGT	TGCAATTTGG	GGGCAGGGGG	240										
CGCACCCGCG	TCAGCAGGCC	CTTCCCAGGG	GGCTCGGAAC	TGTACCATTT	CACCTATGCC	300										
CCTGGTTCG	TTTGCTTAAG	GAAGGATAAG	ATAGAAGAGT	CGGGGAGAGG	AAGATAAAGG	360										
GGGACCCCCC	AATTGGGGGG	GGCGAGGACA	AGAAGTAACA	GGACCAGAGG	GTGGGGGCTG	420										
CTGTTTGCAT	CGGCCACAC	C	ATG	CTG	ACC	CCG	CCG	TTG	CTG	CTG	CTC	GTG	471			
			Met	Leu	Thr	Pro	Pro	Leu	Leu	Leu	Leu	Val				
		1					5					10				
CCG	CTG	CTT	TCA	GCT	CTG	GTC	TCC	GGG	GCC	ACT	ATG	GAT	GCC	CCT	AAA	519
Pro	Leu	Leu	Ser	Ala	Leu	Val	Ser	Gly	Ala	Thr	Met	Asp	Ala	Pro	Lys	
			15						20					25		
ACT	TGC	AGC	CCT	AAG	CAG	TTT	GCC	TGC	AGA	GAC	CAA	ATC	ACC	TGT	ATC	567
Thr	Cys	Ser	Pro	Lys	Gln	Phe	Ala	Cys	Arg	Asp	Gln	Ile	Thr	Cys	Ile	
			30					35					40			
TCA	AAG	GGC	TGG	CGG	TGT	GAC	GGT	GAA	AGA	GAT	TGC	CCC	GAC	GGC	TCT	615
Ser	Lys	Gly	Trp	Arg	Cys	Asp	Gly	Glu	Arg	Asp	Cys	Pro	Asp	Gly	Ser	
		45					50					55				
GAT	GAA	GCC	CCT	GAG	ATC	TGT	CCA	CAG	AGT	AAA	GCC	CAG	AGA	TGC	CCG	663
Asp	Glu	Ala	Pro	Glu	Ile	Cys	Pro	Gln	Ser	Lys	Ala	Gln	Arg	Cys	Pro	
	60					65					70					
CCA	AAT	GAG	CAC	AGT	TGT	CTG	GGG	ACT	GAG	CTA	TGT	GTC	CCC	ATG	TCT	711
Pro	Asn	Glu	His	Ser	Cys	Leu	Gly	Thr	Glu	Leu	Cys	Val	Pro	Met	Ser	
	75				80					85					90	
CGT	CTC	TGC	AAC	GGG	ATC	CAG	GAC	TGC	ATG	GAT	GGC	TCA	GAC	GAG	GGT	759
Arg	Leu	Cys	Asn	Gly	Ile	Gln	Asp	Cys	Met	Asp	Gly	Ser	Asp	Glu	Gly	
				95				100						105		
GCT	CAC	TGC	CGA	GAG	CTC	CGA	GCC	AAC	TGT	TCT	CGA	ATG	GGT	TGT	CAA	807
Ala	His	Cys	Arg	Glu	Leu	Arg	Ala	Asn	Cys	Ser	Arg	Met	Gly	Cys	Gln	
			110					115					120			
CAC	CAT	TGT	GTA	CCT	ACA	CCC	AGT	GGG	CCC	ACG	TGC	TAC	TGT	AAC	AGC	855
His	His	Cys	Val	Pro	Thr	Pro	Ser	Gly	Pro	Thr	Cys	Tyr	Cys	Asn	Ser	
		125					130					135				
AGC	TTC	CAG	CTC	GAG	GCA	GAT	GGC	AAG	ACG	TGC	AAA	GAT	TTT	GAC	GAG	903
Ser	Phe	Gln	Leu	Glu	Ala	Asp	Gly	Lys	Thr	Cys	Lys	Asp	Phe	Asp	Glu	
	140					145					150					
TGT	TCC	GTG	TAT	GGC	ACC	TGC	AGC	CAG	CTT	TGC	ACC	AAC	ACA	GAT	GGC	951
Cys	Ser	Val	Tyr	Gly	Thr	Cys	Ser	Gln	Leu	Cys	Thr	Asn	Thr	Asp	Gly	
	155				160					165					170	
TCC	TTC	ACA	TGT	GGC	TGT	GTT	GAA	GGC	TAC	CTG	CTG	CAA	CCG	GAC	AAC	999
Ser	Phe	Thr	Cys	Gly	Cys	Val	Glu	Gly	Tyr	Leu	Leu	Gln	Pro	Asp	Asn	
				175					180					185		
CGC	TCC	TGC	AAG	GCC	AAG	AAT	GAG	CCA	GTA	GAT	CGG	CCG	CCA	GTG	CTA	1047
Arg	Ser	Cys	Lys	Ala	Lys	Asn	Glu	Pro	Val	Asp	Arg	Pro	Pro	Val	Leu	
			190					195					200			

FIG. 12A

CTG ATT GCC AAC TCT CAG AAC ATC CTA GCT ACG TAC CTG AGT GGG GCC Leu Ile Ala Asn Ser Gln Asn Ile Leu Ala Thr Tyr Leu Ser Gly Ala 205 210 215	1095
CAA GTG TCT ACC ATC ACA CCC ACC AGC ACC CGA CAA ACC ACG GCC ATG Gln Val Ser Thr Ile Thr Pro Thr Ser Thr Arg Gln Thr Thr Ala Met 220 225 230	1143
GAC TTC AGT TAT GCC AAT GAG ACC GTA TGC TGG GTG CAC GTT GGG GAC Asp Phe Ser Tyr Ala Asn Glu Thr Val Cys Trp Val His Val Gly Asp 235 240 245 250	1191
AGT GCT GCC CAG ACA CAG CTC AAG TGT GCC CGG ATG CCT GGC CTG AAG Ser Ala Ala Gln Thr Gln Leu Lys Cys Ala Arg Met Pro Gly Leu Lys 255 260 265	1239
GGC TTT GTG GAT GAG CAT ACC ATC AAC ATC TCC CTC AGC CTG CAC CAC Gly Phe Val Asp Glu His Thr Ile Asn Ile Ser Leu Ser Leu His His 270 275 280	1287
GTG GAG CAG ATG GCA ATC GAC TGG CTG ACG GGA AAC TTC TAC TTT GTC Val Glu Gln Met Ala Ile Asp Trp Leu Thr Gly Asn Phe Tyr Phe Val 285 290 295	1335
GAC GAC ATT GAC GAC AGG ATC TTT GTC TGT AAC CGA AAC GGG GAC ACC Asp Asp Ile Asp Asp Arg Ile Phe Val Cys Asn Arg Asn Gly Asp Thr 300 305 310	1383
TGT GTC ACT CTG CTG GAC CTG GAA CTC TAC AAC CCC AAA GGC ATC GCC Cys Val Thr Leu Leu Asp Leu Glu Leu Tyr Asn Pro Lys Gly Ile Ala 315 320 325 330	1431
TTG GAC CCC GCC ATG GGG AAG GTG TTC TTC ACT GAC TAC GGG CAG ATC Leu Asp Pro Ala Met Gly Lys Val Phe Phe Thr Asp Tyr Gly Gln Ile 335 340 345	1479
CCA AAG GTG GAG CGC TGT GAC ATG GAT GGA CAG AAC CGC ACC AAG CTG Pro Lys Val Glu Arg Cys Asp Met Asp Gly Gln Asn Arg Thr Lys Leu 350 355 360	1527
GTG GAT AGC AAG ATC GTG TTT CCA CAC GGC ATC ACC CTG GAC CTG GTC Val Asp Ser Lys Ile Val Phe Pro His Gly Ile Thr Leu Asp Leu Val 365 370 375	1575
AGC CGC CTC GTC TAC TGG GCG GAC GCC TAC CTA GAC TAC ATC GAG GTG Ser Arg Leu Val Tyr Trp Ala Asp Ala Tyr Leu Asp Tyr Ile Glu Val 380 385 390	1623
GTA GAC TAC GAA GGG AAG GGT CGG CAG ACC ATC ATC CAA GGC ATC CTG Val Asp Tyr Glu Gly Lys Gly Arg Gln Thr Ile Ile Gln Gly Ile Leu 395 400 405 410	1671
ATC GAG CAC CTG TAC GGC CTG ACC GTG TTT GAG AAC TAT CTC TAC GCC Ile Glu His Leu Thr Gly Leu Thr Val Phe Glu Asn Tyr Leu Tyr Ala 415 420 425	1719
ACC AAC TCG GAC AAT GCC AAC ACG CAG CAG AAG ACG AGC GTG ATC CGA Thr Asn Ser Asp Asn Ala Asn Thr Gln Gln Lys Thr Ser Val Ile Arg 430 435 440	1767

FIG. 12A

GTG AAC CGG TTC AAC AGT ACT GAG TAC CAG GTC GTC ACC CGT GTG GAC Val Asn Arg Phe Asn Ser Thr Glu Tyr Gln Val Val Thr Arg Val Asp 445 450 455	1815
AAG GGT GGT GCC CTG CAT ATC TAC CAC CAG CGA CGC CAG CCC CGA GTG Lys Gly Gly Ala Leu His Ile Tyr His Gln Arg Arg Gln Pro Arg Val 460 465 470	1863
CGG AGT CAC GCC TGT GAG AAT GAC CAG TAC GGG AAG CCA GGT GGC TGC Arg Ser His Ala Cys Glu Asn Asp Gln Tyr Gly Lys Pro Gly Gly Cys 475 480 485 490	1911
TCC GAC ATC TGC CTC CTG GCC AAC AGT CAC AAG GCA AGG ACC TGC AGG Ser Asp Ile Cys Leu Leu Ala Asn Ser His Lys Ala Arg Thr Cys Arg 495 500 505	1959
TGC AGG TCT GGC TTC AGC CTG GGA AGT GAT GGG AAG TCT TGT AAG AAA Cys Arg Ser Gly Phe Ser Leu Gly Ser Asp Gly Lys Ser Cys Lys Lys 510 515 520	2007
CCT GAA CAT GAG CTG TTC CTC GTG TAT GGC AAG GGC CGA CCA GGC ATC Pro Glu His Glu Leu Phe Leu Val Tyr Gly Lys Gly Arg Pro Gly Ile 525 530 535	2055
ATT AGA GGC ATG GAC ATG GGG GCC AAG GTC CCA GAT GAG CAC ATG ATC Ile Arg Gly Met Asp Met Gly Ala Lys Val Pro Asp Glu His Met Ile 540 545 550	2103
CCC ATC GAG AAC CTT ATG AAT CCA CGC GCT CTG GAC TTC CAC GCC GAG Pro Ile Glu Asn Leu Met Asn Pro Arg Ala Leu Asp Phe His Ala Glu 555 560 565 570	2151
ACC GGC TTC ATC TAC TTT GCT GAC ACC ACC AGC TAC CTC ATT GGC CGC Thr Gly Phe Ile Tyr Phe Ala Asp Thr Thr Ser Tyr Leu Ile Gly Arg 575 580 585	2199
CAG AAA ATT GAT GGC ACG GAG AGA GAG ACT ATC CTG AAG GAT GGC ATC Gln Lys Ile Asp Gly Thr Glu Arg Glu Thr Ile Leu Lys Asp Gly Ile 590 595 600	2247
CAC AAT GTG GAG GGC GTA GCC GTG GAC TGG ATG GGA GAC AAT CTT TAC His Asn Val Glu Gly Val Ala Val Asp Trp Met Gly Asp Asn Leu Tyr 605 610 615	2295
TGG ACT GAT GAT GGC CCC AAG AAG ACC ATT AGT GTG GCC AGG CTG GAG Trp Thr Asp Asp Gly Pro Lys Lys Thr Ile Ser Val Ala Arg Leu Glu 620 625 630	2343
AAA GCC GCT CAG ACC CGG AAG ACT CTA ATT GAG GGC AAG ATG ACA CAC Lys Ala Ala Gln Thr Arg Lys Thr Leu Ile Glu Gly Lys Met Thr His 635 640 645 650	2391
CCC AGG GCC ATT GTA GTG GAT CCA CTC AAT GGG TGG ATG TAC TGG ACA Pro Arg Ala Ile Val Val Asp Pro Leu Asn Gly Trp Met Tyr Trp Thr 655 660 665	2439
GAC TGG GAG GAG GAC CCC AAG GAC AGT CGG CGA GGG CGG CTC GAG AGG Asp Trp Glu Glu Asp Pro Lys Asp Ser Arg Arg Gly Arg Leu Glu Arg 670 675 680	2487

FIG. 12A

GCT TGG ATG GAC GGC TCA CAC CGA GAT ATC TTT GTC ACC TCC AAG ACA Ala Trp Met Asp Gly Ser His Arg Asp Ile Phe Val Thr Ser Lys Thr 685 690 695	2535
GTG CTT TGG CCC AAT GGG CTA AGC CTG GAT ATC CCA GCC GGA CGC CTC Val Leu Trp Pro Asn Gly Leu Ser Leu Asp Ile Pro Ala Gly Arg Leu 700 705 710	2583
TAC TGG GTG GAT GCC TTC TAT GAC CGA ATT GAG ACC ATA CTG CTC AAT Tyr Trp Val Asp Ala Phe Tyr Asp Arg Ile Glu Thr Ile Leu Leu Asn 715 720 725 730	2631
GGC ACA GAC CGG AAG ATT GTA TAT GAG GGT CCT GAA CTG AAT CAT GCC Gly Thr Asp Arg Lys Ile Val Tyr Glu Gly Pro Glu Leu Asn His Ala 735 740 745	2679
TTC GGC CTG TGT CAC CAT GGC AAC TAC CTC TTT TGG ACC GAG TAC CGG Phe Gly Leu Cys His His Gly Asn Tyr Leu Phe Trp Thr Glu Tyr Arg 750 755 760	2727
AGC GGC AGC GTC TAC CGC TTG GAA CGG GGC GTG GCA GGC GCA CCG CCC Ser Gly Ser Val Tyr Arg Leu Glu Arg Gly Val Ala Gly Ala Pro Pro 765 770 775	2775
ACT GTG ACC CTT CTG CGC AGC GAG AGA CCG CCT ATC TTT GAG ATC CGA Thr Val Thr Leu Leu Arg Ser Glu Arg Pro Pro Ile Phe Glu Ile Arg 780 785 790	2823
ATG TAC GAC GCG CAC GAG CAG CAA GTG GGT ACC AAC AAA TGC CGG GTA Met Tyr Asp Ala His Glu Gln Gln Val Gly Thr Asn Lys Cys Arg Val 795 800 805 810	2871
AAT AAC GGA GGC TGC AGC AGC CTG TGC CTC GCC ACC CCC GGG AGC CGC Asn Asn Gly Gly Cys Ser Ser Leu Cys Leu Ala Thr Pro Gly Ser Arg 815 820 825	2919
CAG TGT GCC TGT GCC GAG GAC CAG GTG TTG GAC ACA GAT GGT GTC ACC Gln Cys Ala Cys Ala Glu Asp Gln Val Leu Asp Thr Asp Gly Val Thr 830 835 840	2967
TGC TTG GCG AAC CCA TCC TAC GTG CCC CCA CCC CAG TGC CAG CCG GGC Cys Leu Ala Asn Pro Ser Tyr Val Pro Pro Pro Gln Cys Gln Pro Gly 845 850 855	3015
CAG TTT GCC TGT GCC AAC AAC CGC TGC ATC CAG GAG CGC TGG AAG TGT Gln Phe Ala Cys Ala Asn Asn Arg Cys Ile Gln Glu Arg Trp Lys Cys 860 865 870	3063
GAC GGA GAC AAC GAC TGT CTG GAC AAC AGC GAT GAG GCC CCA GCA CTG Asp Gly Asp Asn Asp Cys Leu Asp Asn Ser Asp Glu Ala Pro Ala Leu 875 880 885 890	3111
TGC CAT CAA CAC ACC TGT CCC TCG GAC CGA TTC AAG TGT GAG AAC AAC Cys His Gln His Thr Cys Pro Ser Asp Arg Phe Lys Cys Glu Asn Asn 895 900 905	3159
CGG TGT ATC CCC AAC CGC TGG CTC TGT GAT GGG GAT AAT GAT TGT GGC Arg Cys Ile Pro Asn Arg Trp Leu Cys Asp Gly Asp Asn Asp Cys Gly 910 915 920	3207

FIG. 12A

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AAC AGC GAG GAC GAA TCC AAT GCC ACG TGC TCA GCC CGC ACC TGT CCA Asn Ser Glu Asp Glu Ser Asn Ala Thr Cys Ser Ala Arg Thr Cys Pro 925 930 935	3255
CCC AAC CAG TTC TCC TGT GCC AGT GGC CGA TGC ATT CCT ATC TCA TGG Pro Asn Gln Phe Ser Cys Ala Ser Gly Arg Cys Ile Pro Ile Ser Trp 940 945 950	3303
ACC TGT GAT CTG GAT GAT GAC TGT GGG GAC CGG TCC GAT GAG TCA GCC Thr Cys Asp Leu Asp Asp Asp Cys Gly Asp Arg Ser Asp Glu Ser Ala 955 960 965 970	3351
TCA TGC GCC TAC CCC ACC TGC TTC CCC CTG ACT CAA TTT ACC TGC AAC Ser Cys Ala Tyr Pro Thr Cys Phe Pro Leu Thr Gln Phe Thr Cys Asn 975 980 985	3399
AAT GGC AGA TGT ATT AAC ATC AAC TGG CGG TGT GAC AAC GAC AAT GAC Asn Gly Arg Cys Ile Asn Ile Asn Trp Arg Cys Asp Asn Asp Asn Asp 990 995 1000	3447
TGT GGG GAC AAC AGC GAC GAA GCC GGC TGC AGT CAC TCC TGC TCC AGT Cys Gly Asp Asn Ser Asp Glu Ala Gly Cys Ser His Ser Cys Ser Ser 1005 1010 1015	3495
ACC CAG TTC AAG TGC AAC AGT GGC AGA TGC ATC CCC GAG CAC TGG ACG Thr Gln Phe Lys Cys Asn Ser Gly Arg Cys Ile Pro Glu His Trp Thr 1020 1025 1030	3543
TGT GAT GGG GAC AAT GAT TGT GGG GAC TAC AGC GAC GAG ACA CAC GCC Cys Asp Gly Asp Asn Asp Cys Gly Asp Tyr Ser Asp Glu Thr His Ala 1035 1040 1045 1050	3591
AAC TGT ACC AAC CAG GCT ACA AGA CCT CCT GGT GGC TGC CAC TCG GAT Asn Cys Thr Asn Gln Ala Thr Arg Pro Pro Gly Gly Cys His Ser Asp 1055 1060 1065	3639
GAG TTC CAG TGC CCG CTA GAT GGC CTG TGC ATC CCC CTG AGG TGG CGC Glu Phe Gln Cys Pro Leu Asp Gly Leu Cys Ile Pro Leu Arg Trp Arg 1070 1075 1080	3687
TGC GAC GGG GAC ACC GAC TGC ATG GAT TCC AGC GAT GAG AAG AGC TGT Cys Asp Gly Asp Thr Asp Cys Met Asp Ser Ser Asp Glu Lys Ser Cys 1085 1090 1095	3735
GAG GGC GTG ACC CAT GTT TGT GAC CCG AAT GTC AAG TTT GGC TGC AAG Glu Gly Val Thr His Val Cys Asp Pro Asn Val Lys Phe Gly Cys Lys 1100 1105 1110	3783
GAC TCC GCC CGG TGC ATC AGC AAG GCG TGG GTG TGT GAT GGC GAC AGC Asp Ser Ala Arg Cys Ile Ser Lys Ala Trp Val Cys Asp Gly Asp Ser 1115 1120 1125 1130	3831
GAC TGT GAA GAT AAC TCC GAC GAG GAG AAC TGT GAG GCC CTG GCC TGC Asp Cys Glu Asp Asn Ser Asp Glu Glu Asn Cys Glu Ala Leu Ala Cys 1135 1140 1145	3879
AGG CCA CCC TCC CAT CCC TGC GCC AAC AAC ACC TCT GTC TGC CTG CCT Arg Pro Pro Ser His Pro Cys Ala Asn Asn Thr Ser Val Cys Leu Pro 1150 1155 1160	3927

FIG. 12A

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(Sheet 26 of 91)

CCT GAC AAG CTG TGC GAC GGC AAG GAT GAC TGT GGA GAC GGC TCG GAT 3975
 Pro Asp Lys Leu Cys Asp Gly Lys Asp Asp Cys Gly Asp Gly Ser Asp
 1165 1170 1175

GAG GGC GAG CTC TGT GAC CAG TGT TCT CTG AAT AAT GGT GGC TGT AGT 4023
 Glu Gly Glu Leu Cys Asp Gln Cys Ser Leu Asn Asn Gly Gly Cys Ser
 1180 1185 1190

CAC AAC TGC TCA GTG GCC CCT GGT GAA GGC ATC GTG TGC TCT TGC CCT 4071
 His Asn Cys Ser Val Ala Pro Gly Glu Gly Ile Val Cys Ser Cys Pro
 1195 1200 1205 1210

CTG GGC ATG GAG CTG GGC TCT GAC AAC CAC ACC TGC CAG ATC CAG AGC 4119
 Leu Gly Met Glu Leu Gly Ser Asp Asn His Thr Cys Gln Ile Gln Ser
 1215 1220 1225

TAC TGT GCC AAG CAC CTC AAA TGC AGC CAG AAG TGT GAC CAG AAC AAG 4167
 Tyr Cys Ala Lys His Leu Lys Cys Ser Gln Lys Cys Asp Gln Asn Lys
 1230 1235 1240

TTC AGT GTG AAG TGC TCC TGC TAC GAG GGC TGG GTC TTG GAG CCT GAC 4215
 Phe Ser Val Lys Cys Ser Cys Tyr Glu Gly Trp Val Leu Glu Pro Asp
 1245 1250 1255

GGG GAA ACG TGC CGC AGT CTG GAT CCC TTC AAA CTG TTC ATC ATC TTC 4263
 Gly Glu Thr Cys Arg Ser Leu Asp Pro Phe Lys Leu Phe Ile Ile Phe
 1260 1265 1270

TCC AAC CGC CAC GAG ATC AGG CGC ATT GAC CTT CAC AAG GGG GAC TAC 4311
 Ser Asn Arg His Glu Ile Arg Arg Ile Asp Leu His Lys Gly Asp Tyr
 1275 1280 1285 1290

AGC GTC CTA GTG CCT GGC CTG CGC AAC ACT ATT GCC CTG GAC TTC CAC 4359
 Ser Val Leu Val Pro Gly Leu Arg Asn Thr Ile Ala Leu Asp Phe His
 1295 1300 1305

CTC AGC CAG AGT GCC CTC TAC TGG ACC GAC GCG GTA GAG GAC AAG ATC 4407
 Leu Ser Gln Ser Ala Leu Tyr Trp Thr Asp Ala Val Glu Asp Lys Ile
 1310 1315 1320

TAC CGT GGG AAA CTC CTG GAC AAC GGA GCC CTG ACC AGC TTT GAG GTG 4455
 Tyr Arg Gly Lys Leu Leu Asp Asn Gly Ala Leu Thr Ser Phe Glu Val
 1325 1330 1335

GTG ATT CAG TAT GGC TTG GCC ACA CCA GAG GGC CTG GCT GTA GAT TGG 4503
 Val Ile Gln Tyr Gly Leu Ala Thr Pro Glu Gly Leu Ala Val Asp Trp
 1340 1345 1350

ATT GCA GGC AAC ATC TAC TGG GTG GAG AGC AAC CTG GAC CAG ATC GAA 4551
 Ile Ala Gly Asn Ile Tyr Trp Val Glu Ser Asn Leu Asp Gln Ile Glu
 1355 1360 1365 1370

GTG GCC AAG CTG GAC GGA ACC CTC CGA ACC ACT CTG CTG GCG GGT GAC 4599
 Val Ala Lys Leu Asp Gly Thr Leu Arg Thr Thr Leu Leu Ala Gly Asp
 1375 1380 1385

ATT GAG CAC CCG AGG GCC ATC GCT CTG GAC CCT CGG GAT GGG ATT CTG 4647
 Ile Glu His Pro Arg Ala Ile Ala Leu Asp Pro Arg Asp Gly Ile Leu
 1390 1395 1400

FIG. 12A

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TTT TGG ACA GAC TGG GAT GCC AGC CTG CCA CGA ATC GAG GCT GCA TCC 4695
Phe Trp Thr Asp Trp Asp Ala Ser Leu Pro Arg Ile Glu Ala Ala Ser
1405 1410 1415

ATG AGT GGA GCT GGC CGC CGA ACC ATC CAC CGG GAG ACA GGC TCT GGG 4743
Met Ser Gly Ala Gly Arg Arg Thr Ile His Arg Glu Thr Gly Ser Gly
1420 1425 1430

GGC TGC GCC AAT GGG CTC ACC GTG GAT TAC CTG GAG AAG CGC ATC CTC 4791
Gly Cys Ala Asn Gly Leu Thr Val Asp Tyr Leu Glu Lys Arg Ile Leu
1435 1440 1445 1450

TGG ATT GAT GCT AGG TCA GAT GCC ATC TAT TCA GCC CGG TAT GAC GGC 4839
Trp Ile Asp Ala Arg Ser Asp Ala Ile Tyr Ser Ala Arg Tyr Asp Gly
1455 1460 1465

TCC GGC CAC ATG GAG GTG CTT CGG GGA CAC GAG TTC CTG TCA CAC CCA 4887
Ser Gly His Met Glu Val Leu Arg Gly His Glu Phe Leu Ser His Pro
1470 1475 1480

TTT GCC GTG ACA CTG TAC GGT GGG GAG GTG TAC TGG ACC GAC TGG CGA 4935
Phe Ala Val Thr Leu Tyr Gly Gly Glu Val Tyr Trp Thr Asp Trp Arg
1485 1490 1495

ACA AAT ACA CTG GCT AAG GCC AAC AAG TGG ACT GGC CAC AAC GTC ACC 4983
Thr Asn Thr Leu Ala Lys Ala Asn Lys Trp Thr Gly His Asn Val Thr
1500 1505 1510

GTG GTA CAG AGG ACC AAC ACC CAG CCC TTC GAC CTG CAG GTG TAT CAC 5031
Val Val Gln Arg Thr Asn Thr Gln Pro Phe Asp Leu Gln Val Tyr His
1515 1520 1525 1530

CCT TCC CGG CAG CCC ATG GCT CCA AAC CCA TGT GAG GCC AAT GGC GGC 5079
Pro Ser Arg Gln Pro Met Ala Pro Asn Pro Cys Glu Ala Asn Gly Gly
1535 1540 1545

CGG GGC CCC TGT TCC CAT CTG TGC CTC ATC AAC TAC AAC CGG ACC GTC 5127
Arg Gly Pro Cys Ser His Leu Cys Leu Ile Asn Tyr Asn Arg Thr Val
1550 1555 1560

TCC TGG GCC TGT CCC CAC CTC ATG AAG CTG CAC AAG GAC AAC ACC ACC 5175
Ser Trp Ala Cys Pro His Leu Met Lys Leu His Lys Asp Asn Thr Thr
1565 1570 1575

TGC TAT GAG TTT AAG AAG TTC CTG CTG TAC GCA CGT CAG ATG GAG ATC 5223
Cys Tyr Glu Phe Lys Lys Phe Leu Leu Tyr Ala Arg Gln Met Glu Ile
1580 1585 1590

CGG GGC GTG GAC CTG GAT GCC CCG TAC TAC AAT TAT ATC ATC TCC TTC 5271
Arg Gly Val Asp Leu Asp Ala Pro Tyr Tyr Asn Tyr Ile Ile Ser Phe
1595 1600 1605 1610

ACG GTG CCT GAT ATC GAC AAT GTC ACG GTG CTG GAC TAT GAT GCC CGA 5319
Thr Val Pro Asp Ile Asp Asn Val Thr Val Leu Asp Tyr Asp Ala Arg
1615 1620 1625

GAG CAG CGA GTT TAC TGG TCT GAT GTG CGG ACT CAA GCC ATC AAA AGG 5367
Glu Gln Arg Val Tyr Trp Ser Asp Val Arg Thr Gln Ala Ile Lys Arg
1630 1635 1640

FIG. 12A

GCA TTT ATC AAC GGC ACT GGC GTG GAG ACC GTT GTC TCT GCA GAC TTG Ala Phe Ile Asn Gly Thr Gly Val Glu Thr Val Val Ser Ala Asp Leu 1645 1650 1655	5415
CCC AAC GCC CAC GGG CTG GCT GTG GAC TGG GTC TCC CGA AAT CTG TTT Pro Asn Ala His Gly Leu Ala Val Asp Trp Val Ser Arg Asn Leu Phe 1660 1665 1670	5463
TGG ACA AGT TAC GAC ACC AAC AAG AAG CAG ATT AAC GTG GCC CGG CTG Trp Thr Ser Tyr Asp Thr Asn Lys Lys Gln Ile Asn Val Ala Arg Leu 1675 1680 1685 1690	5511
GAC GGC TCC TTC AAG AAT GCG GTG GTG CAG GGC CTG GAG CAG CCC CAC Asp Gly Ser Phe Lys Asn Ala Val Val Gln Gly Leu Glu Gln Pro His 1695 1700 1705	5559
GGC CTG GTC GTC CAC CCG CTT CGT GGC AAG CTC TAC TGG ACT GAT GGG Gly Leu Val Val His Pro Leu Arg Gly Lys Leu Tyr Trp Thr Asp Gly 1710 1715 1720	5607
GAC AAC ATC AGC ATG GCC AAC ATG GAT GGG AGC AAC CAC ACT CTG CTC Asp Asn Ile Ser Met Ala Asn Met Asp Gly Ser Asn His Thr Leu Leu 1725 1730 1735	5655
TTC AGT GGC CAG AAG GGC CCT GTG GGG TTG GCC ATT GAC TTC CCT GAG Phe Ser Gly Gln Lys Gly Pro Val Gly Leu Ala Ile Asp Phe Pro Glu 1740 1745 1750	5703
AGC AAA CTC TAC TGG ATC AGC TCT GGG AAC CAC ACA ATC AAC CGT TGC Ser Lys Leu Tyr Trp Ile Ser Ser Gly Asn His Thr Ile Asn Arg Cys 1755 1760 1765 1770	5751
AAT CTG GAT GGG AGC GAG CTG GAG GTC ATC GAC ACC ATG CGG AGC CAG Asn Leu Asp Gly Ser Glu Leu Glu Val Ile Asp Thr Met Arg Ser Gln 1775 1780 1785	5799
CTG GGC AAG GCC ACT GCC CTG GCC ATC ATG GGG GAC AAG CTG TGG TGG Leu Gly Lys Ala Thr Ala Leu Ala Ile Met Gly Asp Lys Leu Trp Trp 1790 1795 1800	5847
GCA GAT CAG GTG TCA GAG AAG ATG GGC ACG TGC AAC AAA GCC GAT GGC Ala Asp Gln Val Ser Glu Lys Met Gly Thr Cys Asn Lys Ala Asp Gly 1805 1810 1815	5895
TCT GGG TCC GTG GTG CTG CGG AAC AGT ACC ACG TTG GTT ATG CAC ATG Ser Gly Ser Val Val Leu Arg Asn Ser Thr Thr Leu Val Met His Met 1820 1825 1830	5943
AAG GTG TAT GAC GAG AGC ATC CAG CTA GAG CAT GAG GGC ACC AAC CCC Lys Val Tyr Asp Glu Ser Ile Gln Leu Glu His Glu Gly Thr Asn Pro 1835 1840 1845 1850	5991
TGC AGT GTC AAC AAC GGA GAC TGT TCC CAG CTC TGC CTG CCA ACA TCA Cys Ser Val Asn Asn Gly Asp Cys Ser Gln Leu Cys Leu Pro Thr Ser 1855 1860 1865	6039
GAG ACG ACT CGC TCC TGT ATG TGT ACA GCC GGT TAC AGC CTC CGG AGC Glu Thr Thr Arg Ser Cys Met Cys Thr Ala Gly Tyr Ser Leu Arg Ser 1870 1875 1880	6087

FIG. 12A

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GGA CAG CAG GCC TGT GAG GGT GTG GGC TCT TTT CTC CTG TAC TCT GTA Gly Gln Gln Ala Cys Glu Gly Val Gly Ser Phe Leu Leu Tyr Ser Val 1885 1890 1895	6135
CAT GAG GGA ATT CGG GGG ATT CCA CTA GAT CCC AAT GAC AAG TCG GAT His Glu Gly Ile Arg Gly Ile Pro Leu Asp Pro Asn Asp Lys Ser Asp 1900 1905 1910	6183
GCC CTG GTC CCA GTG TCC GGA ACT TCA CTG GCT GTC GGA ATC GAC TTC Ala Leu Val Pro Val Ser Gly Thr Ser Leu Ala Val Gly Ile Asp Phe 1915 1920 1925 1930	6231
CAT GCC GAA AAT GAC ACT ATT TAT TGG GTG GAT ATG GGC CTA AGC ACC His Ala Glu Asn Asp Thr Ile Tyr Trp Val Asp Met Gly Leu Ser Thr 1935 1940 1945	6279
ATC AGC AGG GCC AAG CGT GAC CAG ACA TGG CGA GAG GAT GTG GTG ACC Ile Ser Arg Ala Lys Arg Asp Gln Thr Trp Arg Glu Asp Val Val Thr 1950 1955 1960	6327
AAC GGT ATT GGC CGT GTG GAG GGC ATC GCC GTG GAC TGG ATC GCA GGC Asn Gly Ile Gly Arg Val Glu Gly Ile Ala Val Asp Trp Ile Ala Gly 1965 1970 1975	6375
AAC ATA TAC TGG ACG GAC CAG GGC TTC GAT GTC ATC GAG GTT GCC CGG Asn Ile Tyr Trp Thr Asp Gln Gly Phe Asp Val Ile Glu Val Ala Arg 1980 1985 1990	6423
CTC AAT GGC TCT TTT CGT TAT GTG GTC ATT TCC CAG GGT CTG GAC AAG Leu Asn Gly Ser Phe Arg Tyr Val Val Ile Ser Gln Gly Leu Asp Lys 1995 2000 2005 2010	6471
CCT CGG GCC ATC ACT GTC CAC CCA GAG AAG GGG TAC TTG TTC TGG ACC Pro Arg Ala Ile Thr Val His Pro Glu Lys Gly Tyr Leu Phe Trp Thr 2015 2020 2025	6519
GAG TGG GGT CAT TAC CCA CGT ATT GAG CGG TCT CGC CTT GAT GGC ACA Glu Trp Gly His Tyr Pro Arg Ile Glu Arg Ser Arg Leu Asp Gly Thr 2030 2035 2040	6567
GAG AGA GTG GTG TTG GTT AAT GTC AGC ATC AGC TGG CCC AAT GGC ATC Glu Arg Val Val Leu Val Asn Val Ser Ile Ser Trp Pro Asn Gly Ile 2045 2050 2055	6615
TCA GTA GAC TAT CAG GGC GGC AAG CTC TAC TGG TGT GAT GCT CGG ATG Ser Val Asp Tyr Gln Gly Gly Lys Leu Tyr Trp Cys Asp Ala Arg Met 2060 2065 2070	6663
GAC AAG ATC GAG CGC ATC GAC CTG GAA ACG GGC GAG AAC CGG GAG GTG Asp Lys Ile Glu Arg Ile Asp Leu Glu Thr Gly Glu Asn Arg Glu Val 2075 2080 2085 2090	6711
GTC CTG TCC AGC AAT AAC ATG GAT ATG TTC TCC GTG TCC GTG TTT GAG Val Leu Ser Ser Asn Asn Met Asp Met Phe Ser Val Ser Val Phe Glu 2095 2100 2105	6759
GAC TTC ATC TAC TGG AGT GAC AGA ACT CAC GCC AAT GGC TCC ATC AAG Asp Phe Ile Tyr Trp Ser Asp Arg Thr His Ala Asn Gly Ser Ile Lys 2110 2115 2120	6807

FIG. 12A

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(Sheet 30 of 91)

CGC GGC TGC AAA GAC AAT GCT ACA GAC TCC GTG CCT CTG AGG ACA GGC Arg Gly Cys Lys Asp Asn Ala Thr Asp Ser Val Pro Leu Arg Thr Gly 2125 2130 2135	6855
ATT GGT GTT CAG CTT AAA GAC ATC AAG GTC TTC AAC AGG GAC AGG CAG Ile Gly Val Gln Leu Lys Asp Ile Lys Val Phe Asn Arg Asp Arg Gln 2140 2145 2150	6903
AAG GGT ACC AAT GTG TGC GCG GTA GCC AAC GGC GGG TGC CAG CAG CTC Lys Gly Thr Asn Val Cys Ala Val Ala Asn Gly Gly Cys Gln Gln Leu 2155 2160 2165 2170	6951
TGC TTG TAT CGG GGT GGC GGA CAG CGA GCC TGT GCC TGT GCC CAC GGC Cys Leu Tyr Arg Gly Gly Gly Gln Arg Ala Cys Ala Cys Ala His Gly 2175 2180 2185	6999
ATG CTG GCA GAA GAC GGG GCC TCA TGC CGA GAG TAC GCT GGC TAC CTG Met Leu Ala Glu Asp Gly Ala Ser Cys Arg Glu Tyr Ala Gly Tyr Leu 2190 2195 2200	7047
CTC TAC TCA GAG CGG ACC ATC CTC AAG AGC ATC CAC CTG TCG GAT GAG Leu Tyr Ser Glu Arg Thr Ile Leu Lys Ser Ile His Leu Ser Asp Glu 2205 2210 2215	7095
CGT AAC CTC AAC GCA CCG GTG CAG CCC TTT GAA GAC CCC GAG CAC ATG Arg Asn Leu Asn Ala Pro Val Gln Pro Phe Glu Asp Pro Glu His Met 2220 2225 2230	7143
AAA AAT GTC ATC GCC CTG GCC TTT GAC TAC CGA GCA GGC ACC TCC CCG Lys Asn Val Ile Ala Leu Ala Phe Asp Tyr Arg Ala Gly Thr Ser Pro 2235 2240 2245 2250	7191
GGG ACC CCT AAC CGC ATC TTC TTC AGT GAC ATC CAC TTT GGG AAC ATC Gly Thr Pro Asn Arg Ile Phe Phe Ser Asp Ile His Phe Gly Asn Ile 2255 2260 2265	7239
CAG CAG ATC AAT GAC GAT GGC TCG GGC AGG ACC ACC ATC GTG GAA AAT Gln Gln Ile Asn Asp Asp Gly Ser Gly Arg Thr Thr Ile Val Glu Asn 2270 2275 2280	7287
GTG GGC TCT GTG GAA GGC CTG GCC TAT CAC CGT GGC TGG GAC ACA CTG Val Gly Ser Val Glu Gly Leu Ala Tyr His Arg Gly Trp Asp Thr Leu 2285 2290 2295	7335
TAC TGG ACA AGC TAC ACC ACA TCC ACC ATC ACC CGC CAC ACC GTG GAC Tyr Trp Thr Ser Tyr Thr Thr Ser Thr Ile Thr Arg His Thr Val Asp 2300 2305 2310	7383
CAG ACT CGC CCA GGG GCC TTC GAG AGG GAG ACA GTC ATC ACC ATG TCC Gln Thr Arg Pro Gly Ala Phe Glu Arg Glu Thr Val Ile Thr Met Ser 2315 2320 2325 2330	7431
GGA GAC GAC CAC CCG AGA GCC TTT GTG CTG GAT GAG TGC CAG AAC CTG Gly Asp Asp His Pro Arg Ala Phe Val Leu Asp Glu Cys Gln Asn Leu 2335 2340 2345	7479
ATG TTC TGG ACC AAT TGG AAC GAG CTC CAT CCA AGC ATC ATG CGG GCA Met Phe Trp Thr Asn Trp Asn Glu Leu His Pro Ser Ile Met Arg Ala 2350 2355 2360	7527

FIG. 12A

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(Sh et 31 of 91)

GCC CTA TCC GGA GCC AAC GTC CTG ACC CTC ATT GAG AAG GAC ATC CGC Ala Leu Ser Gly Ala Asn Val Leu Thr Leu Ile Glu Lys Asp Ile Arg 2365 2370 2375	7575
ACG CCC AAT GGG TTG GCC ATC GAC CAC CGG GCG GAG AAG CTG TAC TTC Thr Pro Asn Gly Leu Ala Ile Asp His Arg Ala Glu Lys Leu Tyr Phe 2380 2385 2390	7623
TCG GAT GCC ACC TTG GAC AAG ATC GAG CGC TGC GAG TAC GAC GGC TCC Ser Asp Ala Thr Leu Asp Lys Ile Glu Arg Cys Glu Tyr Asp Gly Ser 2395 2400 2405 2410	7671
CAC CGC TAT GTG ATC CTA AAG TCG GAG CCC GTC CAC CCC TTT GGG TTG His Arg Tyr Val Ile Leu Lys Ser Glu Pro Val His Pro Phe Gly Leu 2415 2420 2425	7719
GCG GTG TAC GGA GAG CAC ATT TTC TGG ACT GAC TGG GTG CGG CGG GCT Ala Val Tyr Gly Glu His Ile Phe Trp Thr Asp Trp Val Arg Arg Ala 2430 2435 2440	7767
GTG CAG CGA GCC AAC AAG TAT GTG GGC AGC GAC ATG AAG CTG CTT CGG Val Gln Arg Ala Asn Lys Tyr Val Gly Ser Asp Met Lys Leu Leu Arg 2445 2450 2455	7815
GTG GAC ATT CCC CAG CAA CCC ATG GGC ATC ATC GCC GTG GCC AAT GAC Val Asp Ile Pro Gln Gln Pro Met Gly Ile Ile Ala Val Ala Asn Asp 2460 2465 2470	7863
ACC AAC AGC TGT GAA CTC TCC CCC TGC CGT ATC AAC AAT GGA GGC TGC Thr Asn Ser Cys Glu Leu Ser Pro Cys Arg Ile Asn Asn Gly Gly Cys 2475 2480 2485 2490	7911
CAG GAT CTG TGT CTG CTC ACC CAC CAA GGC CAC GTC AAC TGT TCC TGT Gln Asp Leu Cys Leu Leu Thr His Gln Gly His Val Asn Cys Ser Cys 2495 2500 2505	7959
CGA GGG GGC CGG ATC CTC CAG GAG GAC TTC ACC TGC CGG GCT GTG AAC Arg Gly Gly Arg Ile Leu Gln Glu Asp Phe Thr Cys Arg Ala Val Asn 2510 2515 2520	8007
TCC TCT TGT CGG GCA CAA GAT GAG TTT GAG TGT GCC AAT GGG GAA TGT Ser Ser Cys Arg Ala Gln Asp Glu Phe Glu Cys Ala Asn Gly Glu Cys 2525 2530 2535	8055
ATC AGC TTC AGC CTC ACC TGT GAT GGC GTC TCC CAC TGC AAG GAC AAG Ile Ser Phe Ser Leu Thr Cys Asp Gly Val Ser His Cys Lys Asp Lys 2540 2545 2550	8103
TCC GAT GAG AAG CCC TCC TAC TGC AAC TCA CGC CGC TGC AAG AAG ACT Ser Asp Glu Lys Pro Ser Tyr Cys Asn Ser Arg Arg Cys Lys Lys Thr 2555 2560 2565 2570	8151
TTC CGC CAG TGT AAC AAT GGC CGC TGT GTA TCC AAC ATG CTG TGG TGC Phe Arg Gln Cys Asn Asn Gly Arg Cys Val Ser Asn Met Leu Trp Cys 2575 2580 2585	8199
AAT GGG GTG GAT TAC TGT GGG GAT GGC TCT GAT GAG ATA CCT TGC AAC Asn Gly Val Asp Tyr Cys Gly Asp Gly Ser Asp Glu Ile Pro Cys Asn 2590 2595 2600	8247

FIG. 12A

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(Sheet 32 of 91)

AAG ACT GCC TGT GGT GTG GGT GAG TTC CGC TGC CGG GAT GGG TCC TGC 8295
 Lys Thr Ala Cys Gly Val Gly Glu Phe Arg Cys Arg Asp Gly Ser Cys
 2605 2610 2615

ATC GGG AAC TCC AGT CGC TGC AAC CAG TTT GTG GAT TGT GAG GAT GCC 8343
 Ile Gly Asn Ser Ser Arg Cys Asn Gln Phe Val Asp Cys Glu Asp Ala
 2620 2625 2630

TCG GAT GAG ATG AAT TGC AGT GCC ACA GAC TGC AGC AGC TAT TTC CGC 8391
 Ser Asp Glu Met Asn Cys Ser Ala Thr Asp Cys Ser Ser Tyr Phe Arg
 2635 2640 2645 2650

CTG GGC GTG AAA GGT GTC CTC TTC CAG CCG TGC GAG CGG ACA TCC CTG 8439
 Leu Gly Val Lys Gly Val Leu Phe Gln Pro Cys Glu Arg Thr Ser Leu
 2655 2660 2665

TGC TAC GCA CCT AGC TGG GTG TGT GAT GGC GCC AAC GAC TGT GGA GAC 8487
 Cys Tyr Ala Pro Ser Trp Val Cys Asp Gly Ala Asn Asp Cys Gly Asp
 2670 2675 2680

TAC AGC GAT GAA CGT GAC TGT CCA GGT GTG AAG CGC CCT AGG TGC CCG 8535
 Tyr Ser Asp Glu Arg Asp Cys Pro Gly Val Lys Arg Pro Arg Cys Pro
 2685 2690 2695

CTC AAT TAC TTT GCC TGC CCC AGC GGG CGC TGT ATC CCC ATG AGC TGG 8583
 Leu Asn Tyr Phe Ala Cys Pro Ser Gly Arg Cys Ile Pro Met Ser Trp
 2700 2705 2710

ACG TGT GAC AAG GAG GAT GAC TGT GAG AAC GGC GAG GAT GAG ACC CAC 8631
 Thr Cys Asp Lys Glu Asp Asp Cys Glu Asn Gly Glu Asp Glu Thr His
 2715 2720 2725 2730

TGC AAC AAG TTC TGC TCA GAG GCA CAG TTC GAG TGC CAG AAC CAC CGG 8679
 Cys Asn Lys Phe Cys Ser Glu Ala Gln Phe Glu Cys Gln Asn His Arg
 2735 2740 2745

TGT ATC TCC AAG CAG TGG CTG TGT GAC GGT AGC GAT GAT TGC GGG GAT 8727
 Cys Ile Ser Lys Gln Trp Leu Cys Asp Gly Ser Asp Asp Cys Gly Asp
 2750 2755 2760

GGC TCC GAT GAG GCA GCT CAC TGT GAA GGC AAG ACA TGT GGC CCC TCC 8775
 Gly Ser Asp Glu Ala Ala His Cys Glu Gly Lys Thr Cys Gly Pro Ser
 2765 2770 2775

TCC TTC TCC TGT CCC GGC ACC CAC GTG TGT GTC CCT GAG CGC TGG CTC 8823
 Ser Phe Ser Cys Pro Gly Thr His Val Cys Val Pro Glu Arg Trp Leu
 2780 2785 2790

TGT GAT GGC GAC AAG GAC TGT ACC GAT GGC GCG GAT GAG AGT GTC ACT 8871
 Cys Asp Gly Asp Lys Asp Cys Thr Asp Gly Ala Asp Glu Ser Val Thr
 2795 2800 2805 2810

GCT GGC TGC CTG TAC AAC AGC ACC TGT GAT GAC CGT GAG TTC ATG TGC 8919
 Ala Gly Cys Leu Tyr Asn Ser Thr Cys Asp Asp Arg Glu Phe Met Cys
 2815 2820 2825

CAG AAC CGC TTG TGT ATT CCC AAG CAT TTC GTG TGC GAC CAT GAC CGT 8967
 Gln Asn Arg Leu Cys Ile Pro Lys His Phe Val Cys Asp His Asp Arg
 2830 2835 2840

FIG. 12A

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GAC TGT GCT GAT GGC TCT GAT GAA TCC CCT GAG TGT GAG TAC CCA ACC Asp Cys Ala Asp Gly Ser Asp Glu Ser Pro Glu Cys Glu Tyr Pro Thr 2845 2850 2855	9015
TGC GGG CCC AAT GAA TTC CGC TGT GCC AAT GGG CGT TGT CTG AGC TCC Cys Gly Pro Asn Glu Phe Arg Cys Ala Asn Gly Arg Cys Leu Ser Ser 2860 2865 2870	9063
CGT CAG TGG GAA TGT GAT GGG GAG AAT GAC TGT CAC GAC CAC AGC GAT Arg Gln Trp Glu Cys Asp Gly Glu Asn Asp Cys His Asp His Ser Asp 2875 2880 2885 2890	9111
GAG GCT CCC AAG AAC CCA CAC TGC ACC AGC CCA GAG CAC AAA TGC AAT Glu Ala Pro Lys Asn Pro His Cys Thr Ser Pro Glu His Lys Cys Asn 2895 2900 2905	9159
GCC TCA TCA CAG TTC CTG TGC AGC AGC GGG CGC TGC GTG GCT GAG GCG Ala Ser Ser Gln Phe Leu Cys Ser Ser Gly Arg Cys Val Ala Glu Ala 2910 2915 2920	9207
TTG CTC TGC AAC GGC CAG GAC GAC TGT GGG GAC GGT TCA GAC GAA CGC Leu Leu Cys Asn Gly Gln Asp Asp Cys Gly Asp Gly Ser Asp Glu Arg 2925 2930 2935	9255
GGG TGC CAT GTC AAC GAG TGT CTC AGC CGC AAG CTC AGT GGC TGC AGT Gly Cys His Val Asn Glu Cys Leu Ser Arg Lys Leu Ser Gly Cys Ser 2940 2945 2950	9303
CAG GAC TGC GAG GAC CTC AAG ATA GGC TTT AAG TGC CGC TGT CGC CCG Gln Asp Cys Glu Asp Leu Lys Ile Gly Phe Lys Cys Arg Cys Arg Pro 2955 2960 2965 2970	9351
GGC TTC CGG CTA AAG GAC GAT GGC AGG ACC TGT GCC GAC CTG GAT GAG Gly Phe Arg Leu Lys Asp Asp Gly Arg Thr Cys Ala Asp Leu Asp Glu 2975 2980 2985	9399
TGC AGC ACC ACC TTC CCC TGC AGC CAG CTC TGC ATC AAC ACC CAC GGA Cys Ser Thr Thr Phe Pro Cys Ser Gln Leu Cys Ile Asn Thr His Gly 2990 2995 3000	9447
AGT TAC AAG TGT CTG TGT GTG GAG GGC TAT GCA CCC CGT GGC GGT GAC Ser Tyr Lys Cys Leu Cys Val Glu Gly Tyr Ala Pro Arg Gly Gly Asp 3005 3010 3015	9495
CCC CAC AGC TGC AAA GCT GTG ACC GAT GAG GAG CCA TTT CTC ATC TTT Pro His Ser Cys Lys Ala Val Thr Asp Glu Glu Pro Phe Leu Ile Phe 3020 3025 3030	9543
GCC AAC CGG TAC TAC CTG CGG AAG CTC AAC CTG GAC GGC TCC AAC TAC Ala Asn Arg Tyr Tyr Leu Arg Lys Leu Asn Leu Asp Gly Ser Asn Tyr 3035 3040 3045 3050	9591
ACA CTG CTT AAG CAG GGC CTG AAC AAT GCG GTC GCC TTG GCA TTT GAC Thr Leu Leu Lys Gln Gly Leu Asn Asn Ala Val Ala Leu Ala Phe Asp 3055 3060 3065	9639
TAC CGA GAG CAG ATG ATC TAC TGG ACG GGC GTG ACC ACC CAG GGC AGC Tyr Arg Glu Gln Met Ile Tyr Trp Thr Gly Val Thr Thr Gln Gly Ser 3070 3075 3080	9687

FIG. 12A

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(Sh et 34 of 91)

ATG ATT CGC AGG ATG CAC CTC AAC GGC AGC AAC GTG CAG GTT CTG CAC	9735
Met Ile Arg Arg Met His Leu Asn Gly Ser Asn Val Gln Val Leu His	
3085 3090 3095	
CGG ACG GGC CTT AGT AAC CCA GAT GGG CTC GCT GTG GAC TGG GTG GGT	9783
Arg Thr Gly Leu Ser Asn Pro Asp Gly Leu Ala Val Asp Trp Val Gly	
3100 3105 3110	
GGC AAC CTG TAC TGG TGT GAC AAG GGC AGA GAT ACC ATT GAG GTG TCC	9831
Gly Asn Leu Tyr Trp Cys Asp Lys Gly Arg Asp Thr Ile Glu Val Ser	
3115 3120 3125 3130	
AAG CTT AAC GGG GCC TAT CGG ACA GTG CTG GTC AGC TCT GGC CTC CGG	9879
Lys Leu Asn Gly Ala Tyr Arg Thr Val Leu Val Ser Ser Gly Leu Arg	
3135 3140 3145	
GAG CCC AGA GCT CTG GTA GTG GAT GTA CAG AAT GGG TAC CTG TAC TGG	9927
Glu Pro Arg Ala Leu Val Val Asp Val Gln Asn Gly Tyr Leu Tyr Trp	
3150 3155 3160	
ACA GAC TGG GGT GAC CAC TCA CTG ATC GGC CGG ATT GGC ATG GAT GGA	9975
Thr Asp Trp Gly Asp His Ser Leu Ile Gly Arg Ile Gly Met Asp Gly	
3165 3170 3175	
TCT GGC CGC AGC ATC ATC GTG GAC ACT AAG ATC ACA TGG CCC AAT GGC	10023
Ser Gly Arg Ser Ile Ile Val Asp Thr Lys Ile Thr Trp Pro Asn Gly	
3180 3185 3190	
CTG ACC GTG GAC TAC GTC ACG GAA CGC ATC TAC TGG GCT GAC GCC CGT	10071
Leu Thr Val Asp Tyr Val Thr Glu Arg Ile Tyr Trp Ala Asp Ala Arg	
3195 3200 3205 3210	
GAG GAC TAC ATC GAG TTC GCC AGC CTG GAT GGC TCC AAC CGT CAC GTT	10119
Glu Asp Tyr Ile Glu Phe Ala Ser Leu Asp Gly Ser Asn Arg His Val	
3215 3220 3225	
GTG CTG AGC CAA GAC ATC CCA CAC ATC TTT GCG CTG ACC CTA TTT GAA	10167
Val Leu Ser Gln Asp Ile Pro His Ile Phe Ala Leu Thr Leu Phe Glu	
3230 3235 3240	
GAC TAC GTC TAC TGG ACA GAC TGG GAA ACG AAG TCC ATC AAC CGG GCC	10215
Asp Tyr Val Tyr Trp Thr Asp Trp Glu Thr Lys Ser Ile Asn Arg Ala	
3245 3250 3255	
CAC AAG ACC ACG GGT GCC AAC AAA ACA CTC CTC ATC AGC ACC CTG CAC	10263
His Lys Thr Thr Gly Ala Asn Lys Thr Leu Leu Ile Ser Thr Leu His	
3260 3265 3270	
CGG CCC ATG GAC TTA CAT GTA TTC CAC GCC CTG CGC CAG CCA GAT GTG	10311
Arg Pro Met Asp Leu His Val Phe His Ala Leu Arg Gln Pro Asp Val	
3275 3280 3285 3290	
CCC AAT CAC CCC TGC AAA GTC AAC AAT GGT GGC TGC AGC AAC CTG TGC	10359
Pro Asn His Pro Cys Lys Val Asn Asn Gly Gly Cys Ser Asn Leu Cys	
3295 3300 3305	
CTG CTG TCC CCT GGG GGT GGT CAC AAG TGC GCC TGC CCC ACC AAC TTC	10407
Leu Leu Ser Pro Gly Gly Gly His Lys Cys Ala Cys Pro Thr Asn Phe	
3310 3315 3320	

FIG. 12A

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(Sheet 35 of 91)

TAT CTG GGT GGC GAT GGC CGT ACC TGT GTG TCC AAC TGC ACA GCA AGC 10455
 Tyr Leu Gly Gly Asp Gly Arg Thr Cys Val Ser Asn Cys Thr Ala Ser
 3325 3330 3335

CAG TTT GTG TGC AAA AAT GAC AAG TGC ATC CCC TTC TGG TGG AAG TGT 10503
 Gln Phe Val Cys Lys Asn Asp Lys Cys Ile Pro Phe Trp Trp Lys Cys
 3340 3345 3350

GAC ACG GAG GAC GAC TGT GGG GAT CAC TCA GAC GAG CCT CCA GAC TGT 10551
 Asp Thr Glu Asp Asp Cys Gly Asp His Ser Asp Glu Pro Pro Asp Cys
 3355 3360 3365 3370

CCC GAG TTC AAG TGC CGC CCA GGC CAG TTC CAG TGC TCC ACC GGC ATC 10599
 Pro Glu Phe Lys Cys Arg Pro Gly Gln Phe Gln Cys Ser Thr Gly Ile
 3375 3380 3385

TGC ACC AAC CCT GCC TTC ATC TGT GAT GGG GAC AAT GAC TGC CAA GAC 10647
 Cys Thr Asn Pro Ala Phe Ile Cys Asp Gly Asp Asn Asp Cys Gln Asp
 3390 3395 3400

AAT AGT GAC GAG GCC AAT TGC GAC ATT CAC GTC TGC TTG CCC AGC CAA 10695
 Asn Ser Asp Glu Ala Asn Cys Asp Ile His Val Cys Leu Pro Ser Gln
 3405 3410 3415

TTC AAG TGC ACC AAC ACC AAC CGC TGC ATT CCT GGC ATC TTC CGT TGC 10743
 Phe Lys Cys Thr Asn Thr Asn Arg Cys Ile Pro Gly Ile Phe Arg Cys
 3420 3425 3430

AAT GGG CAG GAC AAC TGC GGG GAC GGC GAG GAT GAG CGG GAT TGC CCT 10791
 Asn Gly Gln Asp Asn Cys Gly Asp Gly Glu Asp Glu Arg Asp Cys Pro
 3435 3440 3445 3450

GAG GTG ACC TGC GCC CCC AAC CAG TTC CAG TGC TCC ATC ACC AAG CGC 10839
 Glu Val Thr Cys Ala Pro Asn Gln Phe Gln Cys Ser Ile Thr Lys Arg
 3455 3460 3465

TGC ATC CCT CGC GTC TGG GTC TGT GAC AGG GAT AAT CAC TGT GTG GAC 10887
 Cys Ile Pro Arg Val Trp Val Cys Asp Arg Asp Asn His Cys Val Asp
 3470 3475 3480

GGC AGT GAT GAG CCT GCC AAC TGT ACC CAA ATG ACC TGT GGA GTG GAT 10935
 Gly Ser Asp Glu Pro Ala Asn Cys Thr Gln Met Thr Cys Gly Val Asp
 3485 3490 3495

GAG TTC CGC TGC AAG GAT TCT GGC CGC TGC ATC CCC GCG CGC TGG AAG 10983
 Glu Phe Arg Cys Lys Asp Ser Gly Arg Cys Ile Pro Ala Arg Trp Lys
 3500 3505 3510

TGT GAC GGA GAA GAT GAC TGT GGG GAT GGT TCA GAT GAG CCC AAG GAA 11031
 Cys Asp Gly Glu Asp Asp Cys Gly Asp Gly Ser Asp Glu Pro Lys Glu
 3515 3520 3525 3530

GAG TGT GAT GAG CGC ACC TGT GAG CCA TAC CAG TTC CGC TGC AAA AAC 11079
 Glu Cys Asp Glu Arg Thr Cys Glu Pro Tyr Gln Phe Arg Cys Lys Asn
 3535 3540 3545

AAC CGC TGT GTC CCA GGC CGT TGG CAA TGT GAC TAC GAC AAC GAC TGC 11127
 Asn Arg Cys Val Pro Gly Arg Trp Gln Cys Asp Tyr Asp Asn Asp Cys
 3550 3555 3560

FIG. 12A

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(Sheet 36 of 91)

GGA GAT AAC TCG GAC GAG GAG AGC TGC ACA CCT CGG CCC TGC TCT GAG 11175
 Gly Asp Asn Ser Asp Glu Glu Ser Cys Thr Pro Arg Pro Cys Ser Glu
 3565 3570 3575

AGT GAG TTT TTC TGT GCC AAT GGC CGC TGC ATC GCT GGG CGC TGG AAG 11223
 Ser Glu Phe Phe Cys Ala Asn Gly Arg Cys Ile Ala Gly Arg Trp Lys
 3580 3585 3590

TGT GAT GGG GAC CAT GAC TGT GCC GAC GGC TCA GAC GAG AAA GAC TGC 11271
 Cys Asp Gly Asp His Asp Cys Ala Asp Gly Ser Asp Glu Lys Asp Cys
 3595 3600 3605 3610

ACC CCC CGC TGT GAT ATG GAC CAG TTC CAG TGC AAG AGT GGC CAC TGC 11319
 Thr Pro Arg Cys Asp Met Asp Gln Phe Gln Cys Lys Ser Gly His Cys
 3615 3620 3625

ATC CCC CTG CGC TGG CCG TGT GAC GCG GAT GCT GAC TGT ATG GAC GGC 11367
 Ile Pro Leu Arg Trp Pro Cys Asp Ala Asp Ala Asp Cys Met Asp Gly
 3630 3635 3640

AGT GAC GAG GAA GCC TGT GGC ACT GGG GTG AGG ACC TGC CCA TTG GAT 11415
 Ser Asp Glu Glu Ala Cys Gly Thr Gly Val Arg Thr Cys Pro Leu Asp
 3645 3650 3655

GAG TTT CAA TGT AAC AAC ACC TTG TGC AAG CCG CTG GCC TGG AAG TGT 11463
 Glu Phe Gln Cys Asn Asn Thr Leu Cys Lys Pro Leu Ala Trp Lys Cys
 3660 3665 3670

GAT GGA GAG GAC GAC TGT GGG GAC AAC TCA GAT GAG AAC CCC GAG GAA 11511
 Asp Gly Glu Asp Asp Cys Gly Asp Asn Ser Asp Glu Asn Pro Glu Glu
 3675 3680 3685 3690

TGC GCC CGG TTC ATC TGC CCT CCC AAC CGG CCT TTC CGC TGC AAG AAT 11559
 Cys Ala Arg Phe Ile Cys Pro Pro Asn Arg Pro Phe Arg Cys Lys Asn
 3695 3700 3705

GAC CGA GTC TGC CTG TGG ATT GGG CGC CAG TGT GAT GGC GTG GAC AAC 11607
 Asp Arg Val Cys Leu Trp Ile Gly Arg Gln Cys Asp Gly Val Asp Asn
 3710 3715 3720

TGT GGA GAT GGG ACT GAC GAG GAG GAC TGT GAG CCC CCC ACG GCC CAG 11655
 Cys Gly Asp Gly Thr Asp Glu Glu Asp Cys Glu Pro Pro Thr Ala Gln
 3725 3730 3735

AAC CCC CAC TGC AAA GAC AAG AAG GAG TTC CTG TGC CGA AAC CAG CGC 11703
 Asn Pro His Cys Lys Asp Lys Lys Glu Phe Leu Cys Arg Asn Gln Arg
 3740 3745 3750

TGT CTA TCA TCC TCC CTG CGC TGT AAC ATG TTC GAT GAC TGC GGC GAT 11751
 Cys Leu Ser Ser Ser Leu Arg Cys Asn Met Phe Asp Asp Cys Gly Asp
 3755 3760 3765 3770

GGC TCC GAT GAA GAA GAT TGC AGC ATC GAC CCC AAG CTG ACC AGC TGT 11799
 Gly Ser Asp Glu Glu Asp Cys Ser Ile Asp Pro Lys Leu Thr Ser Cys
 3775 3780 3785

GCC ACC AAT GCC AGC ATG TGT GGG GAC GAA GCT CGT TGT GTG CGC ACT 11847
 Ala Thr Asn Ala Ser Met Cys Gly Asp Glu Ala Arg Cys Val Arg Thr
 3790 3795 3800

FIG. 12A

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(Sheet 37 of 91)

GAG AAA GCT GCC TAC TGT GCC TGC CGC TCG GGC TTC CAT ACT GTG CCG Glu Lys Ala Ala Tyr Cys Ala Cys Arg Ser Gly Phe His Thr Val Pro 3805 3810 3815	11895
GGC CAG CCC GGA TGC CAG GAC ATC AAC GAG TGC CTG CGC TTT GGT ACC Gly Gln Pro Gly Cys Gln Asp Ile Asn Glu Cys Leu Arg Phe Gly Thr 3820 3825 3830	11943
TGC TCT CAG CTC TGG AAC AAA CCC AAG GGA GGC CAC CTC TGC AGC TGT Cys Ser Gln Leu Trp Asn Lys Pro Lys Gly Gly His Leu Cys Ser Cys 3835 3840 3845 3850	11991
GCC CGC AAC TTC ATG AAG ACA CAC AAC ACC TGC AAA GCT GAA GGC TCC Ala Arg Asn Phe Met Lys Thr His Asn Thr Cys Lys Ala Glu Gly Ser 3855 3860 3865	12039
GAG TAC CAG GTG CTA TAC ATC GCG GAT GAC AAC GAG ATC CGC AGC TTG Glu Tyr Gln Val Leu Tyr Ile Ala Asp Asp Asn Glu Ile Arg Ser Leu 3870 3875 3880	12087
TTC CCG GGC CAC CCC CAC TCA GCC TAC GAG CAG ACA TTC CAG GGC GAT Phe Pro Gly His Pro His Ser Ala Tyr Glu Gln Thr Phe Gln Gly Asp 3885 3890 3895	12135
GAG AGT GTC CGC ATA GAT GCC ATG GAT GTC CAT GTC AAG GCC GGC CGT Glu Ser Val Arg Ile Asp Ala Met Asp Val His Val Lys Ala Gly Arg 3900 3905 3910	12183
GTC TAC TGG ACT AAC TGG CAC ACG GGC ACA ATC TCC TAC AGG AGC CTG Val Tyr Trp Thr Asn Trp His Thr Gly Thr Ile Ser Tyr Arg Ser Leu 3915 3920 3925 3930	12231
CCC CCT GCC GCC CCT CCT ACC ACT TCC AAC CGC CAC CGG AGG CAG ATC Pro Pro Ala Ala Pro Pro Thr Thr Ser Asn Arg His Arg Arg Gln Ile 3935 3940 3945	12279
GAC CGG GGT GTC ACC CAC CTC AAT ATT TCA GGG CTG AAG ATG CCG AGG Asp Arg Gly Val Thr His Leu Asn Ile Ser Gly Leu Lys Met Pro Arg 3950 3955 3960	12327
GGT ATC GCT ATC GAC TGG GTG GCC GGG AAT GTG TAC TGG ACC GAT TCC Gly Ile Ala Ile Asp Trp Val Ala Gly Asn Val Tyr Trp Thr Asp Ser 3965 3970 3975	12375
GGC CGA GAC GTG ATT GAG GTG GCG CAA ATG AAG GGC GAG AAC CGC AAG Gly Arg Asp Val Ile Glu Val Ala Gln Met Lys Gly Glu Asn Arg Lys 3980 3985 3990	12423
ACG CTC ATC TCG GGC ATG ATT GAT GAG CCC CAT GCC ATC GTG GTG GAC Thr Leu Ile Ser Gly Met Ile Asp Glu Pro His Ala Ile Val Val Asp 3995 4000 4005 4010	12471
CCT CTG AGG GGC ACC ATG TAC TGG TCA GAC TGG GGG AAC CAC CCC AAG Pro Leu Arg Gly Thr Met Tyr Trp Ser Asp Trp Gly Asn His Pro Lys 4015 4020 4025	12519
ATT GAA ACA GCA GCG ATG GAT GGC ACC CTT CGG GAG ACT CTC GTG CAA Ile Glu Thr Ala Ala Met Asp Gly Thr Leu Arg Glu Thr Leu Val Gln 4030 4035 4040	12567

FIG. 12A

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(Sheet 38 of 91)

GAC AAC ATT CAG TGG CCT ACA GGG CTG GCT GTG GAC TAT CAC AAT GAA	12615
Asp Asn Ile Gln Trp Pro Thr Gly Leu Ala Val Asp Tyr His Asn Glu	
4045 4050 4055	
CGG CTC TAC TGG GCA GAT GCC AAG CTT TCG GTC ATC GGC AGC ATC CGG	12663
Arg Leu Tyr Trp Ala Asp Ala Lys Leu Ser Val Ile Gly Ser Ile Arg	
4060 4065 4070	
CTC AAC GGC ACT GAC CCC ATT GTG GCT GCT GAC AGC AAA CGA GGC CTA	12711
Leu Asn Gly Thr Asp Pro Ile Val Ala Ala Asp Ser Lys Arg Gly Leu	
4075 4080 4085 4090	
AGT CAC CCC TTC AGC ATC GAT GTG TTT GAA GAC TAC ATC TAC GGA GTC	12759
Ser His Pro Phe Ser Ile Asp Val Phe Glu Asp Tyr Ile Tyr Gly Val	
4095 4100 4105	
ACT TAC ATC AAT AAT CGT GTC TTC AAG ATC CAC AAG TTT GGA CAC AGC	12807
Thr Tyr Ile Asn Asn Arg Val Phe Lys Ile His Lys Phe Gly His Ser	
4110 4115 4120	
CCC TTG TAC AAC CTA ACT GGG GGC CTG AGC CAT GCC TCT GAT GTA GTC	12855
Pro Leu Tyr Asn Leu Thr Gly Gly Leu Ser His Ala Ser Asp Val Val	
4125 4130 4135	
CTT TAC CAT CAA CAC AAG CAG CCT GAA GTG ACC AAC CCC TGT GAC CGC	12903
Leu Tyr His Gln His Lys Gln Pro Glu Val Thr Asn Pro Cys Asp Arg	
4140 4145 4150	
AAG AAA TGC GAA TGG CTG TGT CTG CTG AGC CCC AGC GGG CCT GTC TGC	12951
Lys Lys Cys Glu Trp Leu Cys Leu Leu Ser Pro Ser Gly Pro Val Cys	
4155 4160 4165 4170	
ACC TGT CCC AAT GGA AAG AGG CTG GAT AAT GGC ACC TGT GTG CCT GTG	12999
Thr Cys Pro Asn Gly Lys Arg Leu Asp Asn Gly Thr Cys Val Pro Val	
4175 4180 4185	
CCC TCT CCA ACA CCC CCT CCA GAT GCC CCT AGG CCT GGA ACC TGC ACT	13047
Pro Ser Pro Thr Pro Pro Pro Asp Ala Pro Arg Pro Gly Thr Cys Thr	
4190 4195 4200	
CTG CAG TGC TTC AAT GGT GGT AGT TGT TTC CTC AAC GCT CGG AGG CAG	13095
Leu Gln Cys Phe Asn Gly Gly Ser Cys Phe Leu Asn Ala Arg Arg Gln	
4205 4210 4215	
CCC AAG TGC CGT TGC CAG CCC CGT TAC ACA GGC GAT AAG TGT GAG CTG	13143
Pro Lys Cys Arg Cys Gln Pro Arg Tyr Thr Gly Asp Lys Cys Glu Leu	
4220 4225 4230	
GAT CAG TGC TGG GAA TAC TGT CAC AAC GGA GGC ACC TGT GCG GCT TCC	13191
Asp Gln Cys Trp Glu Tyr Cys His Asn Gly Gly Thr Cys Ala Ala Ser	
4235 4240 4245 4250	
CCA TCT GGC ATG CCC ACG TGC CGC TGT CCC ACT GGC TTC ACG GGC CCC	13239
Pro Ser Gly Met Pro Thr Cys Arg Cys Pro Thr Gly Phe Thr Gly Pro	
4255 4260 4265	
AAA TGC ACC GCA CAG GTG TGT GCA GGC TAC TGC TCT AAC AAC AGC ACC	13287
Lys Cys Thr Ala Gln Val Cys Ala Gly Tyr Cys Ser Asn Asn Ser Thr	
4270 4275 4280	

FIG. 12A

8449-134

(Sheet 39 of 91)

TGC ACC GTC AAC CAG GGC AAC CAG CCC CAG TGC CGA TGT CTA CCT GGC Cys Thr Val Asn Gln Gly Asn Gln Pro Gln Cys Arg Cys Leu Pro Gly 4285 4290 4295	13335
TTC CTG GGC GAC CGT TGC CAG TAC CGG CAG TGC TCT GGC TTC TGT GAG Phe Leu Gly Asp Arg Cys Gln Tyr Arg Gln Cys Ser Gly Phe Cys Glu 4300 4305 4310	13383
AAC TTT GGC ACC TGT CAG ATG GCT GCT GAT GGC TCC CGA CAA TGT CGC Asn Phe Gly Thr Cys Gln Met Ala Ala Asp Gly Ser Arg Gln Cys Arg 4315 4320 4325 4330	13431
TGC ACC GTC TAC TTT GAG GGA CCA AGG TGT GAG GTG AAC AAG TGT AGT Cys Thr Val Tyr Phe Glu Gly Pro Arg Cys Glu Val Asn Lys Cys Ser 4335 4340 4345	13479
CGC TGT CTC CAA GGC GCC TGT GTG GTC AAT AAG CAG ACC GGA GAT GTC Arg Cys Leu Gln Gly Ala Cys Val Val Asn Lys Gln Thr Gly Asp Val 4350 4355 4360	13527
ACA TGC AAC TGC ACT GAT GGC CGG GTA GCC CCC AGT TGT CTC ACC TGC Thr Cys Asn Cys Thr Asp Gly Arg Val Ala Pro Ser Cys Leu Thr Cys 4365 4370 4375	13575
ATC GAT CAC TGT AGC AAT GGT GGC TCC TGC ACC ATG AAC AGC AAG ATG Ile Asp His Cys Ser Asn Gly Gly Ser Cys Thr Met Asn Ser Lys Met 4380 4385 4390	13623
ATG CCT GAG TGC CAG TGC CCG CCC CAT ATG ACA GGA CCC CGG TGC CAG Met Pro Glu Cys Gln Cys Pro Pro His Met Thr Gly Pro Arg Cys Gln 4395 4400 4405 4410	13671
GAG CAG GTT GTT AGT CAG CAA CAG CCT GGG CAT ATG GCC TCC ATC CTG Glu Gln Val Val Ser Gln Gln Gln Pro Gly His Met Ala Ser Ile Leu 4415 4420 4425	13719
ATC CCT CTG CTG CTG CTT CTC CTG CTG CTT CTG GTG GCT GGC GTG GTG Ile Pro Leu Leu Leu Leu Leu Leu Leu Leu Val Ala Gly Val Val 4430 4435 4440	13767
TTC TGG TAT AAG CGG CGA GTC CGA GGG GCT AAG GGC TTC CAG CAC CAG Phe Trp Tyr Lys Arg Arg Val Arg Gly Ala Lys Gly Phe Gln His Gln 4445 4450 4455	13815
CGG ATG ACC AAT GGG GCC ATG AAT GTG GAA ATT GGA AAC CCT ACC TAC Arg Met Thr Asn Gly Ala Met Asn Val Glu Ile Gly Asn Pro Thr Tyr 4460 4465 4470	13863
AAG ATG TAT GAA GGT GGA GAG CCC GAT GAT GTC GGG GGC CTA CTG GAT Lys Met Tyr Glu Gly Gly Glu Pro Asp Asp Val Gly Gly Leu Leu Asp 4475 4480 4485 4490	13911
GCT GAT TTT GCC CTT GAC CCT GAC AAG CCT ACC AAC TTC ACC AAC CCA Ala Asp Phe Ala Leu Asp Pro Asp Lys Pro Thr Asn Phe Thr Asn Pro 4495 4500 4505	13959
GTG TAT GCC ACG CTC TAC ATG GGG GGC CAC GGC AGC CGC CAT TCC CTG Val Tyr Ala Thr Leu Tyr Met Gly Gly His Gly Ser Arg His Ser Leu 4510 4515 4520	14007

FIG. 12A

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(Sheet 40 of 91)

GCC AGC ACG GAC GAG AAG CGA GAA CTG CTG GGC CGG GGA CCT GAA GAC	14055
Ala Ser Thr Asp Glu Lys Arg Glu Leu Leu Gly Arg Gly Pro Glu Asp	
4525 4530 4535	
GAG ATA GGA GAT CCC TTG GCA TAGGGCCCTG CCCCAGCGGA TGTCCCCAGA AAGC	14110
CCCCTGCCAC ATGAGTCTTT CAATGAACCC CCTCCCCAGC CGGCCCTTCT CCGGCCCTGC	14170
Glu Ile Gly Asp Pro Leu Ala	
4540 4545	
CGGGTGTACA AATGTAAAAA TGAAGGAATT ACTTTTTATA TGTGAGCGAG CAAGCGAGCA	14230
AGCACAGTAT TATCTCTTTG CATTTCCTTC CTGCCTGCTC CTCAGTATCC CCCCATGCT	14290
GCCTTGAGGG GGCGGGGAGG GCTTTGTGGC TCAAAGGTAT GAAGGAGTCC ACATGTTCCC	14350
TACCGAGCAT ACCCCTGGAA GCCTGGCGGC ACGGCCTCCC CACCACGCCT GTGCAAGACA	14410
CTCAACGGGG CTCCGTGTCC CAGCTTTCCT TTCCTTGGCT CTCTGGGGTT AGTTCAGGGG	14470
AGGTGGAGTC CTCTGCTGAC CCTGTCTGGA AGATTGGCT CTAGCTGAGG AAGGAGTCTT	14530
TTAGTTGAGG GAAGTCACCC CAAACCCAG CTCCCACCTT CAGGGGCACC TCTCAGATGG	14590
CCATGCTCAG TATCCCTTCC AGACAGGCC TCCCCTCTCT AGCGCCCCCT CTGTGGCTCC	14650
TAGGGCTGAA CACATTCTTT GGTAAGTCTC CCCCAGCCT CCCATCCCC TGAGGGCCAG	14710
GAAGAGTCGG GGCACACCAA GGAAGGGCAA GCGGGCAGCC CCATTTTGGG GACGTGAACG	14770
TTTTAATAAT TTTTGCTGAA TTCCTTTACA ACTAATAAC ACAGATATTG TTATAAATAA	14830
AATTGTAAAA AAAAAAAAAA	

FIG. 12A

8449-134

(Sh et 41 of 91)

Met Leu Thr Pro Pro Leu Leu Leu Leu Val Pro Leu Leu Ser Ala Leu
 1 5 10 15
 Val Ser Gly Ala Thr Met Asp Ala Pro Lys Thr Cys Ser Pro Lys Gln
 20 25 30
 Phe Ala Cys Arg Asp Gln Ile Thr Cys Ile Ser Lys Gly Trp Arg Cys
 35 40 45
 Asp Gly Glu Arg Asp Cys Pro Asp Gly Ser Asp Glu Ala Pro Glu Ile
 50 55 60
 Cys Pro Gln Ser Lys Ala Gln Arg Cys Pro Pro Asn Glu His Ser Cys
 65 70 75 80
 Leu Gly Thr Glu Leu Cys Val Pro Met Ser Arg Leu Cys Asn Gly Ile
 85 90 95
 Gln Asp Cys Met Asp Gly Ser Asp Glu Gly Ala His Cys Arg Glu Leu
 100 105 110
 Arg Ala Asn Cys Ser Arg Met Gly Cys Gln His His Cys Val Pro Thr
 115 120 125
 Pro Ser Gly Pro Thr Cys Tyr Cys Asn Ser Ser Phe Gln Leu Glu Ala
 130 135 140
 Asp Gly Lys Thr Cys Lys Asp Phe Asp Glu Cys Ser Val Tyr Gly Thr
 145 150 155 160
 Cys Ser Gln Leu Cys Thr Asn Thr Asp Gly Ser Phe Thr Cys Gly Cys
 165 170 175
 Val Glu Gly Tyr Leu Leu Gln Pro Asp Asn Arg Ser Cys Lys Ala Lys
 180 185 190
 Asn Glu Pro Val Asp Arg Pro Pro Val Leu Leu Ile Ala Asn Ser Gln
 195 200 205
 Asn Ile Leu Ala Thr Tyr Leu Ser Gly Ala Gln Val Ser Thr Ile Thr
 210 215 220
 Pro Thr Ser Thr Arg Gln Thr Thr Ala Met Asp Phe Ser Tyr Ala Asn
 225 230 235 240
 Glu Thr Val Cys Trp Val His Val Gly Asp Ser Ala Ala Gln Thr Gln
 245 250 255
 Leu Lys Cys Ala Arg Met Pro Gly Leu Lys Gly Phe Val Asp Glu His
 260 265 270
 Thr Ile Asn Ile Ser Leu Ser Leu His His Val Glu Gln Met Ala Ile
 275 280 285
 Asp Trp Leu Thr Gly Asn Phe Tyr Phe Val Asp Asp Ile Asp Asp Arg
 290 295 300
 Ile Phe Val Cys Asn Arg Asn Gly Asp Thr Cys Val Thr Leu Leu Asp
 305 310 315 320
 Leu Glu Leu Tyr Asn Pro Lys Gly Ile Ala Leu Asp Pro Ala Met Gly
 325 330 335
 Lys Val Phe Phe Thr Asp Tyr Gly Gln Ile Pro Lys Val Glu Arg Cys
 340 345 350
 Asp Met Asp Gly Gln Asn Arg Thr Lys Leu Val Asp Ser Lys Ile Val
 355 360 365
 Phe Pro His Gly Ile Thr Leu Asp Leu Val Ser Arg Leu Val Tyr Trp
 370 375 380
 Ala Asp Ala Tyr Leu Asp Tyr Ile Glu Val Val Asp Tyr Glu Gly Lys
 385 390 395 400
 Gly Arg Gln Thr Ile Ile Gln Gly Ile Leu Ile Glu His Leu Tyr Gly
 405 410 415
 Leu Thr Val Phe Glu Asn Tyr Leu Tyr Ala Thr Asn Ser Asp Asn Ala
 420 425 430
 Asn Thr Gln Gln Lys Thr Ser Val Ile Arg Val Asn Arg Phe Asn Ser
 435 440 445
 Thr Glu Tyr Gln Val Val Thr Arg Val Asp Lys Gly Gly Ala Leu His
 450 455 460

FIG. 12B

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(Sheet 42 of 91)

Ile Tyr His Gln Arg Arg Gln Pro Arg Val Arg Ser His Ala Cys Glu
 465 470 475 480
 Asn Asp Gln Tyr Gly Lys Pro Gly Gly Cys Ser Asp Ile Cys Leu Leu
 485 490 495
 Ala Asn Ser His Lys Ala Arg Thr Cys Arg Cys Arg Ser Gly Phe Ser
 500 505 510
 Leu Gly Ser Asp Gly Lys Ser Cys Lys Lys Pro Glu His Glu Leu Phe
 515 520 525
 Leu Val Tyr Gly Lys Gly Arg Pro Gly Ile Ile Arg Gly Met Asp Met
 530 535 540
 Gly Ala Lys Val Pro Asp Glu His Met Ile Pro Ile Glu Asn Leu Met
 545 550 555 560
 Asn Pro Arg Ala Leu Asp Phe His Ala Glu Thr Gly Phe Ile Tyr Phe
 565 570 575
 Ala Asp Thr Thr Ser Tyr Leu Ile Gly Arg Gln Lys Ile Asp Gly Thr
 580 585 590
 Glu Arg Glu Thr Ile Leu Lys Asp Gly Ile His Asn Val Glu Gly Val
 595 600 605
 Ala Val Asp Trp Met Gly Asp Asn Leu Tyr Trp Thr Asp Asp Gly Pro
 610 615 620
 Lys Lys Thr Ile Ser Val Ala Arg Leu Glu Lys Ala Ala Gln Thr Arg
 625 630 635 640
 Lys Thr Leu Ile Glu Gly Lys Met Thr His Pro Arg Ala Ile Val Val
 645 650 655
 Asp Pro Leu Asn Gly Trp Met Tyr Trp Thr Asp Trp Glu Glu Asp Pro
 660 665 670
 Lys Asp Ser Arg Arg Gly Arg Leu Glu Arg Ala Trp Met Asp Gly Ser
 675 680 685
 His Arg Asp Ile Phe Val Thr Ser Lys Thr Val Leu Trp Pro Asn Gly
 690 695 700
 Leu Ser Leu Asp Ile Pro Ala Gly Arg Leu Tyr Trp Val Asp Ala Phe
 705 710 715 720
 Tyr Asp Arg Ile Glu Thr Ile Leu Leu Asn Gly Thr Asp Arg Lys Ile
 725 730 735
 Val Tyr Glu Gly Pro Glu Leu Asn His Ala Phe Gly Leu Cys His His
 740 745 750
 Gly Asn Tyr Leu Phe Trp Thr Glu Tyr Arg Ser Gly Ser Val Tyr Arg
 755 760 765
 Leu Glu Arg Gly Val Ala Gly Ala Pro Pro Thr Val Thr Leu Leu Arg
 770 775 780
 Ser Glu Arg Pro Pro Ile Phe Glu Ile Arg Met Tyr Asp Ala His Glu
 785 790 795 800
 Gln Gln Val Gly Thr Asn Lys Cys Arg Val Asn Asn Gly Gly Cys Ser
 805 810 815
 Ser Leu Cys Leu Ala Thr Pro Gly Ser Arg Gln Cys Ala Cys Ala Glu
 820 825 830
 Asp Gln Val Leu Asp Thr Asp Gly Val Thr Cys Leu Ala Asn Pro Ser
 835 840 845
 Tyr Val Pro Pro Pro Gln Cys Gln Pro Gly Gln Phe Ala Cys Ala Asn
 850 855 860
 Asn Arg Cys Ile Gln Glu Arg Trp Lys Cys Asp Gly Asp Asn Asp Cys
 865 870 875 880
 Leu Asp Asn Ser Asp Glu Ala Pro Ala Leu Cys His Gln His Thr Cys
 885 890 895
 Pro Ser Asp Arg Phe Lys Cys Glu Asn Asn Arg Cys Ile Pro Asn Arg
 900 905 910
 Trp Leu Cys Asp Gly Asp Asn Asp Cys Gly Asn Ser Glu Asp Glu Ser
 915 920 925

FIG. 12B

8449-134

(Sheet 43 of 91)

Asn Ala Thr Cys Ser Ala Arg Thr Cys Pro Pro Asn Gln Phe Ser Cys
 930 935 940
 Ala Ser Gly Arg Cys Ile Pro Ile Ser Trp Thr Cys Asp Leu Asp Asp
 945 950 955 960
 Asp Cys Gly Asp Arg Ser Asp Glu Ser Ala Ser Cys Ala Tyr Pro Thr
 965 970 975
 Cys Phe Pro Leu Thr Gln Phe Thr Cys Asn Asn Gly Arg Cys Ile Asn
 980 985 990
 Ile Asn Trp Arg Cys Asp Asn Asp Asn Asp Cys Gly Asp Asn Ser Asp
 995 1000 1005
 Glu Ala Gly Cys Ser His Ser Cys Ser Ser Thr Gln Phe Lys Cys Asn
 1010 1015 1020
 Ser Gly Arg Cys Ile Pro Glu His Trp Thr Cys Asp Gly Asp Asn Asp
 025 1030 1035 1040
 Cys Gly Asp Tyr Ser Asp Glu Thr His Ala Asn Cys Thr Asn Gln Ala
 1045 1050 1055
 Thr Arg Pro Pro Gly Gly Cys His Ser Asp Glu Phe Gln Cys Pro Leu
 1060 1065 1070
 Asp Gly Leu Cys Ile Pro Leu Arg Trp Arg Cys Asp Gly Asp Thr Asp
 1075 1080 1085
 Cys Met Asp Ser Ser Asp Glu Lys Ser Cys Glu Gly Val Thr His Val
 1090 1095 1100
 Cys Asp Pro Asn Val Lys Phe Gly Cys Lys Asp Ser Ala Arg Cys Ile
 105 1110 1115 1120
 Ser Lys Ala Trp Val Cys Asp Gly Asp Ser Asp Cys Glu Asp Asn Ser
 1125 1130 1135
 Asp Glu Glu Asn Cys Glu Ala Leu Ala Cys Arg Pro Pro Ser His Pro
 1140 1145 1150
 Cys Ala Asn Asn Thr Ser Val Cys Leu Pro Pro Asp Lys Leu Cys Asp
 1155 1160 1165
 Gly Lys Asp Asp Cys Gly Asp Gly Ser Asp Glu Gly Glu Leu Cys Asp
 1170 1175 1180
 Gln Cys Ser Leu Asn Asn Gly Gly Cys Ser His Asn Cys Ser Val Ala
 185 1190 1195 1200
 Pro Gly Glu Gly Ile Val Cys Ser Cys Pro Leu Gly Met Glu Leu Gly
 1205 1210 1215
 Ser Asp Asn His Thr Cys Gln Ile Gln Ser Tyr Cys Ala Lys His Leu
 1220 1225 1230
 Lys Cys Ser Gln Lys Cys Asp Gln Asn Lys Phe Ser Val Lys Cys Ser
 1235 1240 1245
 Cys Tyr Glu Gly Trp Val Leu Glu Pro Asp Gly Glu Thr Cys Arg Ser
 1250 1255 1260
 Leu Asp Pro Phe Lys Leu Phe Ile Ile Phe Ser Asn Arg His Glu Ile
 265 1270 1275 1280
 Arg Arg Ile Asp Leu His Lys Gly Asp Tyr Ser Val Leu Val Pro Gly
 1285 1290 1295
 Leu Arg Asn Thr Ile Ala Leu Asp Phe His Leu Ser Gln Ser Ala Leu
 1300 1305 1310
 Tyr Trp Thr Asp Ala Val Glu Asp Lys Ile Tyr Arg Gly Lys Leu Leu
 1315 1320 1325
 Asp Asn Gly Ala Leu Thr Ser Phe Glu Val Val Ile Gln Tyr Gly Leu
 1330 1335 1340
 Ala Thr Pro Glu Gly Leu Ala Val Asp Trp Ile Ala Gly Asn Ile Tyr
 345 1350 1355 1360
 Trp Val Glu Ser Asn Leu Asp Gln Ile Glu Val Ala Lys Leu Asp Gly
 1365 1370 1375
 Thr Leu Arg Thr Thr Leu Leu Ala Gly Asp Ile Glu His Pro Arg Ala
 1380 1385 1390
 Ile Ala Leu Asp Pro Arg Asp Gly Ile Leu Phe Trp Thr Asp Trp Asp

FIG. 12B

[illegible]

(Sh et 44 of 91)

1395	1400	1405
Ala Ser Leu Pro Arg Ile Glu	Ala Ala Ser Met Ser Gly	Ala Gly Arg
1410	1415	1420
Arg Thr Ile His Arg Glu Thr Gly	Ser Gly Gly Cys Ala Asn Gly Leu	
425	1430	1435
Thr Val Asp Tyr Leu Glu Lys Arg	Ile Leu Trp Ile Asp Ala Arg Ser	
	1445	1450
Asp Ala Ile Tyr Ser Ala Arg Tyr	Asp Gly Ser Gly His Met Glu Val	
	1460	1465
Leu Arg Gly His Glu Phe Leu Ser	His Pro Phe Ala Val Thr Leu Tyr	
	1475	1480
Gly Gly Glu Val Tyr Trp Thr Asp	Trp Arg Thr Asn Thr Leu Ala Lys	
	1490	1495
Ala Asn Lys Trp Thr Gly His Asn	Val Thr Val Val Gln Arg Thr Asn	
505	1510	1515
Thr Gln Pro Phe Asp Leu Gln Val	Tyr His Pro Ser Arg Gln Pro Met	
	1525	1530
Ala Pro Asn Pro Cys Glu Ala Asn	Gly Gly Arg Gly Pro Cys Ser His	
	1540	1545
Leu Cys Leu Ile Asn Tyr Asn Arg	Thr Val Ser Trp Ala Cys Pro His	
	1555	1560
Leu Met Lys Leu His Lys Asp Asn	Thr Thr Cys Tyr Glu Phe Lys Lys	
	1570	1575
Phe Leu Leu Tyr Ala Arg Gln Met	Glu Ile Arg Gly Val Asp Leu Asp	
585	1590	1595
Ala Pro Tyr Tyr Asn Tyr Ile Ile	Ser Phe Thr Val Pro Asp Ile Asp	
	1605	1610
Asn Val Thr Val Leu Asp Tyr Asp	Ala Arg Glu Gln Arg Val Tyr Trp	
	1620	1625
Ser Asp Val Arg Thr Gln Ala Ile	Lys Arg Ala Phe Ile Asn Gly Thr	
	1635	1640
Gly Val Glu Thr Val Val Ser Ala	Asp Leu Pro Asn Ala His Gly Leu	
	1650	1655
Ala Val Asp Trp Val Ser Arg Asn	Leu Phe Trp Thr Ser Tyr Asp Thr	
665	1670	1675
Asn Lys Lys Gln Ile Asn Val Ala	Arg Leu Asp Gly Ser Phe Lys Asn	
	1685	1690
Ala Val Val Gln Gly Leu Glu Gln	Pro His Gly Leu Val Val His Pro	
	1700	1705
Leu Arg Gly Lys Leu Tyr Trp Thr	Asp Gly Asp Asn Ile Ser Met Ala	
	1715	1720
Asn Met Asp Gly Ser Asn His Thr	Leu Leu Phe Ser Gly Gln Lys Gly	
	1730	1735
Pro Val Gly Leu Ala Ile Asp Phe	Pro Glu Ser Lys Leu Tyr Trp Ile	
745	1750	1755
Ser Ser Gly Asn His Thr Ile Asn	Arg Cys Asn Leu Asp Gly Ser Glu	
	1765	1770
Leu Glu Val Ile Asp Thr Met Arg	Ser Gln Leu Gly Lys Ala Thr Ala	
	1780	1785
Leu Ala Ile Met Gly Asp Lys Leu	Trp Trp Ala Asp Gln Val Ser Glu	
	1795	1800
Lys Met Gly Thr Cys Asn Lys Ala	Asp Gly Ser Gly Ser Val Val Leu	
	1810	1815
Arg Asn Ser Thr Thr Leu Val Met	His Met Lys Val Tyr Asp Glu Ser	
825	1830	1835
Ile Gln Leu Glu His Glu Gly Thr	Asn Pro Cys Ser Val Asn Asn Gly	
	1845	1850
Asp Cys Ser Gln Leu Cys Leu Pro	Thr Ser Glu Thr Thr Arg Ser Cys	
	1860	1865
		1870

FIG. 12B

Met	Cys	Thr	Ala	Gly	Tyr	Ser	Leu	Arg	Ser	Gly	Gln	Ala	Cys	Glu
	1875						1880				1885			
Gly	Val	Gly	Ser	Phe	Leu	Leu	Tyr	Ser	Val	His	Glu	Gly	Ile	Arg
	1890						1895				1900			
Ile	Pro	Leu	Asp	Pro	Asn	Asp	Lys	Ser	Asp	Ala	Leu	Val	Pro	Val
905					1910					1915				1920
Gly	Thr	Ser	Leu	Ala	Val	Gly	Ile	Asp	Phe	His	Ala	Glu	Asn	Asp
			1925						1930					1935
Ile	Tyr	Trp	Val	Asp	Met	Gly	Leu	Ser	Thr	Ile	Ser	Arg	Ala	Lys
		1940						1945					1950	
Asp	Gln	Thr	Trp	Arg	Glu	Asp	Val	Val	Thr	Asn	Gly	Ile	Gly	Arg
	1955						1960				1965			Val
Glu	Gly	Ile	Ala	Val	Asp	Trp	Ile	Ala	Gly	Asn	Ile	Tyr	Trp	Thr
	1970					1975				1980				Asp
Gln	Gly	Phe	Asp	Val	Ile	Glu	Val	Ala	Arg	Leu	Asn	Gly	Ser	Phe
985					1990					1995				Arg
Tyr	Val	Val	Ile	Ser	Gln	Gly	Leu	Asp	Lys	Pro	Arg	Ala	Ile	Thr
				2005					2010					Val
His	Pro	Glu	Lys	Gly	Tyr	Leu	Phe	Trp	Thr	Glu	Trp	Gly	His	Tyr
		2020						2025					2030	Pro
Arg	Ile	Glu	Arg	Ser	Arg	Leu	Asp	Gly	Thr	Glu	Arg	Val	Val	Leu
	2035						2040					2045		Val
Asn	Val	Ser	Ile	Ser	Trp	Pro	Asn	Gly	Ile	Ser	Val	Asp	Tyr	Gln
	2050					2055					2060			Gly
Gly	Lys	Leu	Tyr	Trp	Cys	Asp	Ala	Arg	Met	Asp	Lys	Ile	Glu	Arg
065					2070					2075				Ile
Asp	Leu	Glu	Thr	Gly	Glu	Asn	Arg	Glu	Val	Val	Leu	Ser	Ser	Asn
			2085						2090					Asn
Met	Asp	Met	Phe	Ser	Val	Ser	Val	Phe	Glu	Asp	Phe	Ile	Tyr	Trp
		2100						2105					2110	Ser
Asp	Arg	Thr	His	Ala	Asn	Gly	Ser	Ile	Lys	Arg	Gly	Cys	Lys	Asp
	2115					2120					2125			Asn
Ala	Thr	Asp	Ser	Val	Pro	Leu	Arg	Thr	Gly	Ile	Gly	Val	Gln	Leu
	2130					2135					2140			Lys
Asp	Ile	Lys	Val	Phe	Asn	Arg	Asp	Arg	Gln	Lys	Gly	Thr	Asn	Val
145					2150					2155				Cys
Ala	Val	Ala	Asn	Gly	Gly	Cys	Gln	Gln	Leu	Cys	Leu	Tyr	Arg	Gly
			2165						2170					Gly
Gly	Gln	Arg	Ala	Cys	Ala	Cys	Ala	His	Gly	Met	Leu	Ala	Glu	Asp
	2180							2185				2190		Gly
Ala	Ser	Cys	Arg	Glu	Tyr	Ala	Gly	Tyr	Leu	Leu	Tyr	Ser	Glu	Arg
	2195						2200					2205		Thr
Ile	Leu	Lys	Ser	Ile	His	Leu	Ser	Asp	Glu	Arg	Asn	Leu	Asn	Ala
	2210					2215					2220			

FIG. 12B

2340 2345 2350
 Asn Glu Leu His Pro Ser Ile Met Arg Ala Ala Leu Ser Gly Ala Asn
 2355 2360 2365
 Val Leu Thr Leu Ile Glu Lys Asp Ile Arg Thr Pro Asn Gly Leu Ala
 2370 2375 2380
 Ile Asp His Arg Ala Glu Lys Leu Tyr Phe Ser Asp Ala Thr Leu Asp
 385 2390 2395 2400
 Lys Ile Glu Arg Cys Glu Tyr Asp Gly Ser His Arg Tyr Val Ile Leu
 2405 2410 2415
 Lys Ser Glu Pro Val His Pro Phe Gly Leu Ala Val Tyr Gly Glu His
 2420 2425 2430
 Ile Phe Trp Thr Asp Trp Val Arg Arg Ala Val Gln Arg Ala Asn Lys
 2435 2440 2445
 Tyr Val Gly Ser Asp Met Lys Leu Leu Arg Val Asp Ile Pro Gln Gln
 2450 2455 2460
 Pro Met Gly Ile Ile Ala Val Ala Asn Asp Thr Asn Ser Cys Glu Leu
 465 2470 2475 2480
 Ser Pro Cys Arg Ile Asn Asn Gly Gly Cys Gln Asp Leu Cys Leu Leu
 2485 2490 2495
 Thr His Gln Gly His Val Asn Cys Ser Cys Arg Gly Gly Arg Ile Leu
 2500 2505 2510
 Gln Glu Asp Phe Thr Cys Arg Ala Val Asn Ser Ser Cys Arg Ala Gln
 2515 2520 2525
 Asp Glu Phe Glu Cys Ala Asn Gly Glu Cys Ile Ser Phe Ser Leu Thr
 2530 2535 2540
 Cys Asp Gly Val Ser His Cys Lys Asp Lys Ser Asp Glu Lys Pro Ser
 545 2550 2555 2560
 Tyr Cys Asn Ser Arg Arg Cys Lys Lys Thr Phe Arg Gln Cys Asn Asn
 2565 2570 2575
 Gly Arg Cys Val Ser Asn Met Leu Trp Cys Asn Gly Val Asp Tyr Cys
 2580 2585 2590
 Gly Asp Gly Ser Asp Glu Ile Pro Cys Asn Lys Thr Ala Cys Gly Val
 2595 2600 2605
 Gly Glu Phe Arg Cys Arg Asp Gly Ser Cys Ile Gly Asn Ser Ser Arg
 2610 2615 2620
 Cys Asn Gln Phe Val Asp Cys Glu Asp Ala Ser Asp Glu Met Asn Cys
 625 2630 2635 2640
 Ser Ala Thr Asp Cys Ser Ser Tyr Phe Arg Leu Gly Val Lys Gly Val
 2645 2650 2655
 Leu Phe Gln Pro Cys Glu Arg Thr Ser Leu Cys Tyr Ala Pro Ser Trp
 2660 2665 2670
 Val Cys Asp Gly Ala Asn Asp Cys Gly Asp Tyr Ser Asp Glu Arg Asp
 2675 2680 2685
 Cys Pro Gly Val Lys Arg Pro Arg Cys Pro Leu Asn Tyr Phe Ala Cys
 2690 2695 2700
 Pro Ser Gly Arg Cys Ile Pro Met Ser Trp Thr Cys Asp Lys Glu Asp
 705 2710 2715 2720
 Asp Cys Glu Asn Gly Glu Asp Glu Thr His Cys Asn Lys Phe Cys Ser
 2725 2730 2735
 Glu Ala Gln Phe Glu Cys Gln Asn His Arg Cys Ile Ser Lys Gln Trp
 2740 2745 2750
 Leu Cys Asp Gly Ser Asp Asp Cys Gly Asp Gly Ser Asp Glu Ala Ala
 2755 2760 2765
 His Cys Glu Gly Lys Thr Cys Gly Pro Ser Ser Phe Ser Cys Pro Gly
 2770 2775 2780
 Thr His Val Cys Val Pro Glu Arg Trp Leu Cys Asp Gly Asp Lys Asp
 785 2790 2795 2800
 Cys Thr Asp Gly Ala Asp Glu Ser Val Thr Ala Gly Cys Leu Tyr Asn
 2805 2810 2815

FIG. 12B

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Ser Thr Cys Asp Asp Arg Glu Phe Met Cys Gln Asn Arg Leu Cys Ile
 2820 2825 2830
 Pro Lys His Phe Val Cys Asp His Asp Arg Asp Cys Ala Asp Gly Ser
 2835 2840 2845
 Asp Glu Ser Pro Glu Cys Glu Tyr Pro Thr Cys Gly Pro Asn Glu Phe
 2850 2855 2860
 Arg Cys Ala Asn Gly Arg Cys Leu Ser Ser Arg Gln Trp Glu Cys Asp
 865 2870 2875 2880
 Gly Glu Asn Asp Cys His Asp His Ser Asp Glu Ala Pro Lys Asn Pro
 2885 2890 2895
 His Cys Thr Ser Pro Glu His Lys Cys Asn Ala Ser Ser Gln Phe Leu
 2900 2905 2910
 Cys Ser Ser Gly Arg Cys Val Ala Glu Ala Leu Leu Cys Asn Gly Gln
 2915 2920 2925
 Asp Asp Cys Gly Asp Gly Ser Asp Glu Arg Gly Cys His Val Asn Glu
 2930 2935 2940
 Cys Leu Ser Arg Lys Leu Ser Gly Cys Ser Gln Asp Cys Glu Asp Leu
 945 2950 2955 2960
 Lys Ile Gly Phe Lys Cys Arg Cys Arg Pro Gly Phe Arg Leu Lys Asp
 2965 2970 2975
 Asp Gly Arg Thr Cys Ala Asp Leu Asp Glu Cys Ser Thr Thr Phe Pro
 2980 2985 2990
 Cys Ser Gln Leu Cys Ile Asn Thr His Gly Ser Tyr Lys Cys Leu Cys
 2995 3000 3005
 Val Glu Gly Tyr Ala Pro Arg Gly Gly Asp Pro His Ser Cys Lys Ala
 3010 3015 3020
 Val Thr Asp Glu Glu Pro Phe Leu Ile Phe Ala Asn Arg Tyr Tyr Leu
 025 3030 3035 3040
 Arg Lys Leu Asn Leu Asp Gly Ser Asn Tyr Thr Leu Leu Lys Gln Gly
 3045 3050 3055
 Leu Asn Asn Ala Val Ala Leu Ala Phe Asp Tyr Arg Glu Gln Met Ile
 3060 3065 3070
 Tyr Trp Thr Gly Val Thr Thr Gln Gly Ser Met Ile Arg Arg Met His
 3075 3080 3085
 Leu Asn Gly Ser Asn Val Gln Val Leu His Arg Thr Gly Leu Ser Asn
 3090 3095 3100
 Pro Asp Gly Leu Ala Val Asp Trp Val Gly Gly Asn Leu Tyr Trp Cys
 105 3110 3115 3120
 Asp Lys Gly Arg Asp Thr Ile Glu Val Ser Lys Leu Asn Gly Ala Tyr
 3125 3130 3135
 Arg Thr Val Leu Val Ser Ser Gly Leu Arg Glu Pro Arg Ala Leu Val
 3140 3145 3150
 Val Asp Val Gln Asn Gly Tyr Leu Tyr Trp Thr Asp Trp Gly Asp His
 3155 3160 3165
 Ser Leu Ile Gly Arg Ile Gly Met Asp Gly Ser Gly Arg Ser Ile Ile
 3170 3175 3180
 Val Asp Thr Lys Ile Thr Trp Pro Asn Gly Leu Thr Val Asp Tyr Val
 185 3190 3195 3200
 Thr Glu Arg Ile Tyr Trp Ala Asp Ala Arg Glu Asp Tyr Ile Glu Phe
 3205 3210 3215
 Ala Ser Leu Asp Gly Ser Asn Arg His Val Val Leu Ser Gln Asp Ile
 3220 3225 3230
 Pro His Ile Phe Ala Leu Thr Leu Phe Glu Asp Tyr Val Tyr Trp Thr
 3235 3240 3245
 Asp Trp Glu Thr Lys Ser Ile Asn Arg Ala His Lys Thr Thr Gly Ala
 3250 3255 3260
 Asn Lys Thr Leu Leu Ile Ser Thr Leu His Arg Pro Met Asp Leu His
 265 3270 3275 3280
 Val Phe His Ala Leu Arg Gln Pro Asp Val Pro Asn His Pro Cys Lys

FIG. 12B

3285 3290 3295
 Val Asn Asn Gly Gly Cys Ser Asn Leu Cys Leu Leu Ser Pro Gly Gly
 3300 3305 3310
 Gly His Lys Cys Ala Cys Pro Thr Asn Phe Tyr Leu Gly Gly Asp Gly
 3315 3320 3325
 Arg Thr Cys Val Ser Asn Cys Thr Ala Ser Gln Phe Val Cys Lys Asn
 3330 3335 3340
 Asp Lys Cys Ile Pro Phe Trp Trp Lys Cys Asp Thr Glu Asp Asp Cys
 345 3350 3355 3360
 Gly Asp His Ser Asp Glu Pro Pro Asp Cys Pro Glu Phe Lys Cys Arg
 3365 3370 3375
 Pro Gly Gln Phe Gln Cys Ser Thr Gly Ile Cys Thr Asn Pro Ala Phe
 3380 3385 3390
 Ile Cys Asp Gly Asp Asn Asp Cys Gln Asp Asn Ser Asp Glu Ala Asn
 3395 3400 3405
 Cys Asp Ile His Val Cys Leu Pro Ser Gln Phe Lys Cys Thr Asn Thr
 3410 3415 3420
 Asn Arg Cys Ile Pro Gly Ile Phe Arg Cys Asn Gly Gln Asp Asn Cys
 425 3430 3435 3440
 Gly Asp Gly Glu Asp Glu Arg Asp Cys Pro Glu Val Thr Cys Ala Pro
 3445 3450 3455
 Asn Gln Phe Gln Cys Ser Ile Thr Lys Arg Cys Ile Pro Arg Val Trp
 3460 3465 3470
 Val Cys Asp Arg Asp Asn His Cys Val Asp Gly Ser Asp Glu Pro Ala
 3475 3480 3485
 Asn Cys Thr Gln Met Thr Cys Gly Val Asp Glu Phe Arg Cys Lys Asp
 3490 3495 3500
 Ser Gly Arg Cys Ile Pro Ala Arg Trp Lys Cys Asp Gly Glu Asp Asp
 505 3510 3515 3520
 Cys Gly Asp Gly Ser Asp Glu Pro Lys Glu Glu Cys Asp Glu Arg Thr
 3525 3530 3535
 Cys Glu Pro Tyr Gln Phe Arg Cys Lys Asn Asn Arg Cys Val Pro Gly
 3540 3545 3550
 Arg Trp Gln Cys Asp Tyr Asp Asn Asp Cys Gly Asp Asn Ser Asp Glu
 3555 3560 3565
 Glu Ser Cys Thr Pro Arg Pro Cys Ser Glu Ser Glu Phe Phe Cys Ala
 3570 3575 3580
 Asn Gly Arg Cys Ile Ala Gly Arg Trp Lys Cys Asp Gly Asp His Asp
 585 3590 3595 3600
 Cys Ala Asp Gly Ser Asp Glu Lys Asp Cys Thr Pro Arg Cys Asp Met
 3605 3610 3615
 Asp Gln Phe Gln Cys Lys Ser Gly His Cys Ile Pro Leu Arg Trp Pro
 3620 3625 3630
 Cys Asp Ala Asp Ala Asp Cys Met Asp Gly Ser Asp Glu Glu Ala Cys
 3635 3640 3645
 Gly Thr Gly Val Arg Thr Cys Pro Leu Asp Glu Phe Gln Cys Asn Asn
 3650 3655 3660
 Thr Leu Cys Lys Pro Leu Ala Trp Lys Cys Asp Gly Glu Asp Asp Cys
 665 3670 3675 3680
 Gly Asp Asn Ser Asp Glu Asn Pro Glu Glu Cys Ala Arg Phe Ile Cys
 3685 3690 3695
 Pro Pro Asn Arg Pro Phe Arg Cys Lys Asn Asp Arg Val Cys Leu Trp
 3700 3705 3710
 Ile Gly Arg Gln Cys Asp Gly Val Asp Asn Cys Gly Asp Gly Thr Asp
 3715 3720 3725
 Glu Glu Asp Cys Glu Pro Pro Thr Ala Gln Asn Pro His Cys Lys Asp
 3730 3735 3740
 Lys Lys Glu Phe Leu Cys Arg Asn Gln Arg Cys Leu Ser Ser Ser Leu
 745 3750 3755 3760

FIG. 12B

[illegible]

FIG. 12B

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225 4230 4235 4240
 Cys His Asn Gly Gly Thr Cys Ala Ala Ser Pro Ser Gly Met Pro Thr
 4245 4250 4255
 Cys Arg Cys Pro Thr Gly Phe Thr Gly Pro Lys Cys Thr Ala Gln Val
 4260 4265 4270
 Cys Ala Gly Tyr Cys Ser Asn Asn Ser Thr Cys Thr Val Asn Gln Gly
 4275 4280 4285
 Asn Gln Pro Gln Cys Arg Cys Leu Pro Gly Phe Leu Gly Asp Arg Cys
 4290 4295 4300
 Gln Tyr Arg Gln Cys Ser Gly Phe Cys Glu Asn Phe Gly Thr Cys Gln
 305 4310 4315 4320
 Met Ala Ala Asp Gly Ser Arg Gln Cys Arg Cys Thr Val Tyr Phe Glu
 4325 4330 4335
 Gly Pro Arg Cys Glu Val Asn Lys Cys Ser Arg Cys Leu Gln Gly Ala
 4340 4345 4350
 Cys Val Val Asn Lys Gln Thr Gly Asp Val Thr Cys Asn Cys Thr Asp
 4355 4360 4365
 Gly Arg Val Ala Pro Ser Cys Leu Thr Cys Ile Asp His Cys Ser Asn
 4370 4375 4380
 Gly Gly Ser Cys Thr Met Asn Ser Lys Met Met Pro Glu Cys Gln Cys
 385 4390 4395 4400
 Pro Pro His Met Thr Gly Pro Arg Cys Gln Glu Gln Val Val Ser Gln
 4405 4410 4415
 Gln Gln Pro Gly His Met Ala Ser Ile Leu Ile Pro Leu Leu Leu
 4420 4425 4430
 Leu Leu Leu Leu Leu Val Ala Gly Val Val Phe Trp Tyr Lys Arg Arg
 4435 4440 4445
 Val Arg Gly Ala Lys Gly Phe Gln His Gln Arg Met Thr Asn Gly Ala
 4450 4455 4460
 Met Asn Val Glu Ile Gly Asn Pro Thr Tyr Lys Met Tyr Glu Gly Gly
 465 4470 4475 4480
 Glu Pro Asp Asp Val Gly Gly Leu Leu Asp Ala Asp Phe Ala Leu Asp
 4485 4490 4495
 Pro Asp Lys Pro Thr Asn Phe Thr Asn Pro Val Tyr Ala Thr Leu Tyr
 4500 4505 4510
 Met Gly Gly His Gly Ser Arg His Ser Leu Ala Ser Thr Asp Glu Lys
 4515 4520 4525
 Arg Glu Leu Leu Gly Arg Gly Pro Glu Asp Glu Ile Gly Asp Pro Leu
 4530 4535 4540
 Ala
 545

FIG. 12B

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GCTACAATCC ATCTGGTCTC CTCCAGCTCC TTCTTTCTGC AAC ATG GGG AAG AAC	55
Met Gly Lys Asn	
1	
AAA CTC CTT CAT CCA AGT CTG GTT CTT CTC CTC TTG GTC CTC CTG CCC	103
Lys Leu Leu His Pro Ser Leu Val Leu Leu Leu Leu Val Leu Leu Pro	
5 10 15 20	
ACA GAC GCC TCA GTC TCT GGA AAA CCG CAG TAT ATG GTT CTG GTC CCC	151
Thr Asp Ala Ser Val Ser Gly Lys Pro Gln Tyr Met Val Leu Val Pro	
25 30 35	
TCC CTG CTC CAC ACT GAG ACC ACT GAG AAG GGC TGT GTC CTT CTG AGC	199
Ser Leu Leu His Thr Glu Thr Thr Glu Lys Gly Cys Val Leu Leu Ser	
40 45 50	
TAC CTG AAT GAG ACA GTG ACT GTA AGT GCT TCC TTG GAG TCT GTC AGG	247
Tyr Leu Asn Glu Thr Val Thr Val Ser Ala Ser Leu Glu Ser Val Arg	
55 60 65	
GGA AAC AGG AGC CTC TTC ACT GAC CTG GAG GCG GAG AAT GAC GTA CTC	295
Gly Asn Arg Ser Leu Phe Thr Asp Leu Glu Ala Glu Asn Asp Val Leu	
70 75 80	
CAC TGT GTC GCC TTC GCT GTC CCA AAG TCT TCA TCC AAT GAG GAG GTA	343
His Cys Val Ala Phe Ala Val Pro Lys Ser Ser Ser Asn Glu Glu Val	
85 90 95 100	
ATG TTC CTC ACT GTC CAA GTG AAA GGA CCA ACC CAA GAA TTT AAG AAG	391
Met Phe Leu Thr Val Gln Val Lys Gly Pro Thr Gln Glu Phe Lys Lys	
105 110 115	
CGG ACC ACA GTG ATG GTT AAG AAC GAG GAC AGT CTG GTC TTT GTC CAG	439
Arg Thr Thr Val Met Val Lys Asn Glu Asp Ser Leu Val Phe Val Gln	
120 125 130	
ACA GAC AAA TCA ATC TAC AAA CCA GGG CAG ACA GTG AAA TTT CGT GTT	487
Thr Asp Lys Ser Ile Tyr Lys Pro Gly Gln Thr Val Lys Phe Arg Val	
135 140 145	
GTC TCC ATG GAT GAA AAC TTT CAC CCC CTG AAT GAG TTG ATT CCA CTA	535
Val Ser Met Asp Glu Asn Phe His Pro Leu Asn Glu Leu Ile Pro Leu	
150 155 160	
GTA TAC ATT CAG GAT CCC AAA GGA AAT CGC ATC GCA CAA TGG CAG AGT	583
Val Tyr Ile Gln Asp Pro Lys Gly Asn Arg Ile Ala Gln Trp Gln Ser	
165 170 175 180	
TTC CAG TTA GAG GGT GGC CTC AAG CAA TTT TCT TTT CCC CTC TCA TCA	631
Phe Gln Leu Glu Gly Gly Leu Lys Gln Phe Ser Phe Pro Leu Ser Ser	
185 190 195	
GAG CCC TTC CAG GGC TCC TAC AAG GTG GTG GTA CAG AAG AAA TCA GGT	679
Glu Pro Phe Gln Gly Ser Tyr Lys Val Val Val Gln Lys Lys Ser Gly	
200 205 210	
GGA AGG ACA GAG CAC CCT TTC ACC GTG GAG GAA TTT GTT CTT CCC AAG	727

FIG. 13A

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Gly	Arg	Thr	Glu	His	Pro	Phe	Thr	Val	Glu	Glu	Phe	Val	Leu	Pro	Lys	
215							220					225				
TTT	GAA	GTA	CAA	GTA	ACA	GTG	CCA	AAG	ATA	ATC	ACC	ATC	TTG	GAA	GAA	775
Phe	Glu	Val	Gln	Val	Thr	Val	Pro	Lys	Ile	Ile	Thr	Ile	Leu	Glu	Glu	
230						235					240					
GAG	ATG	AAT	GTA	TCA	GTG	TGT	GGC	CTA	TAC	ACA	TAT	GGG	AAG	CCT	GTC	823
Glu	Met	Asn	Val	Ser	Val	Cys	Gly	Leu	Tyr	Thr	Tyr	Gly	Lys	Pro	Val	
245					250					255					260	
CCT	GGA	CAT	GTG	ACT	GTG	AGC	ATT	TGC	AGA	AAG	TAT	AGT	GAC	GCT	TCC	871
Pro	Gly	His	Val	Thr	Val	Ser	Ile	Cys	Arg	Lys	Tyr	Ser	Asp	Ala	Ser	
				265					270					275		
GAC	TGC	CAC	GGT	GAA	GAT	TCA	CAG	GCT	TTC	TGT	GAG	AAA	TTC	AGT	GGA	919
Asp	Cys	His	Gly	Glu	Asp	Ser	Gln	Ala	Phe	Cys	Glu	Lys	Phe	Ser	Gly	
			280					285					290			
CAG	CTA	AAC	AGC	CAT	GGC	TGC	TTC	TAT	CAG	CAA	GTA	AAA	ACC	AAG	GTC	967
Gln	Leu	Asn	Ser	His	Gly	Cys	Phe	Tyr	Gln	Gln	Val	Lys	Thr	Lys	Val	
		295					300					305				
TTC	CAG	CTG	AAG	AGG	AAG	GAG	TAT	GAA	ATG	AAA	CTT	CAC	ACT	GAG	GCC	1015
Phe	Gln	Leu	Lys	Arg	Lys	Glu	Tyr	Glu	Met	Lys	Leu	His	Thr	Glu	Ala	
	310					315					320					
CAG	ATC	CAA	GAA	GAA	GGA	ACA	GTG	GTG	GAA	TTG	ACT	GGA	AGG	CAG	TCC	1063
Gln	Ile	Gln	Glu	Glu	Gly	Thr	Val	Val	Glu	Leu	Thr	Gly	Arg	Gln	Ser	
325					330					335					340	
AGT	GAA	ATC	ACA	AGA	ACC	ATA	ACC	AAA	CTC	TCA	TTT	GTG	AAA	GTG	GAC	1111
Ser	Glu	Ile	Thr	Arg	Thr	Ile	Thr	Lys	Leu	Ser	Phe	Val	Lys	Val	Asp	
				345				350						355		
TCA	CAC	TTT	CGA	CAG	GGA	ATT	CCC	TTC	TTT	GGG	CAG	GTG	CGC	CTA	GTA	1159
Ser	His	Phe	Arg	Gln	Gly	Ile	Pro	Phe	Phe	Gly	Gln	Val	Arg	Leu	Val	
			360					365					370			
GAT	GGG	AAA	GGC	GTC	CCT	ATA	CCA	AAT	AAA	GTC	ATA	TTC	ATC	AGA	GGA	1207
Asp	Gly	Lys	Gly	Val	Pro	Ile	Pro	Asn	Lys	Val	Ile	Phe	Ile	Arg	Gly	
		375					380					385				
AAT	GAA	GCA	AAC	TAT	TAC	TCC	AAT	GCT	ACC	ACG	GAT	GAG	CAT	GGC	CTT	1255
Asn	Glu	Ala	Asn	Tyr	Tyr	Ser	Asn	Ala	Thr	Thr	Asp	Glu	His	Gly	Leu	
	390					395					400					
GTA	CAG	TTC	TCT	ATC	AAC	ACC	ACC	AAC	GTT	ATG	GGT	ACC	TCT	CTT	ACT	1303
Val	Gln	Phe	Ser	Ile	Asn	Thr	Thr	Asn	Val	Met	Gly	Thr	Ser	Leu	Thr	
405					410					415					420	
GTT	AGG	GTC	AAT	TAC	AAG	GAT	CGT	AGT	CCC	TGT	TAC	GGC	TAC	CAG	TGG	1351
Val	Arg	Val	Asn	Tyr	Lys	Asp	Arg	Ser	Pro	Cys	Tyr	Gly	Tyr	Gln	Trp	
				425					430					435		
GTG	TCA	GAA	GAA	CAC	GAA	GAG	GCA	CAT	CAC	ACT	GCT	TAT	CTT	GTG	TTC	1399
Val	Ser	Glu	Glu	His	Glu	Glu	Ala	His	His	Thr	Ala	Tyr	Leu	Val	Phe	
		440						445					450			

FIG. 13A

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TCC Ser	CCA Pro	AGC Ser 455	AAG Lys	AGC Ser	TTT Phe	GTC Val	CAC His 460	CTT Leu	GAG Glu	CCC Pro	ATG Met	TCT Ser 465	CAT His	GAA Glu	CTA Leu	1447
CCC Pro	TGT Cys 470	GGC Gly	CAT His	ACT Thr	CAG Gln	ACA Thr 475	GTC Val	CAG Gln	GCA Ala	CAT His	TAT Tyr 480	ATT Ile	CTG Leu	AAT Asn	GGA Gly	1495
GGC Gly 485	ACC Thr	CTG Leu	CTG Leu	GGG Gly 490	CTG Leu	AAG Lys	AAG Lys	CTC Leu	TCC Ser	TTT Phe 495	TAT Tyr	TAT Tyr	CTG Leu	ATA Ile	ATG Met 500	1543
GCA Ala	AAG Lys	GGA Gly	GGC Gly	ATT Ile 505	GTC Val	CGA Arg	ACT Thr	GGG Gly	ACT Thr 510	CAT His	GGA Gly	CTG Leu	CTT Leu	GTG Val 515	AAG Lys	1591
CAG Gln	GAA Glu	GAC Asp	ATG Met 520	AAG Lys	GGC Gly	CAT His	TTT Phe	TCC Ser 525	ATC Ile	TCA Ser	ATC Ile	CCT Pro	GTG Val 530	AAG Lys	TCA Ser	1639
GAC Asp	ATT Ile	GCT Ala 535	CCT Pro	GTC Val	GCT Ala	CGG Arg	TTG Leu 540	CTC Leu	ATC Ile	TAT Tyr	GCT Ala 545	GTT Val	TTA Leu	CCT Pro	ACC Thr	1687
GGG Gly 550	GAC Asp	GTG Val	ATT Ile	GGG Gly	GAT Asp	TCT Ser 555	GCA Ala	AAA Lys	TAT Tyr	GAT Asp	GTT Val 560	GAA Glu	AAT Asn	TGT Cys	CTG Leu	1735
GCC Ala 565	AAC Asn	AAG Lys	GTG Val	GAT Asp	TTG Leu 570	AGC Ser	TTC Phe	AGC Ser	CCA Pro	TCA Ser 575	CAA Gln	AGT Ser	CTC Leu	CCA Pro	GCC Ala 580	1783
TCA Ser	CAC His	GCC Ala	CAC His	CTG Leu 585	CGA Arg	GTC Val	ACA Thr	GCG Ala	GCT Ala 590	CCT Pro	CAG Gln	TCC Ser	GTC Val	TGC Cys 595	GCC Ala	1831
CTC Leu	CGT Arg	GCT Ala	GTG Val 600	GAC Asp	CAA Gln	AGC Ser	GTG Val 605	CTG Leu	CTC Leu	ATG Met	AAG Lys	CCT Pro	GAT Asp 610	GCT Ala	GAG Glu	1879
CTC Leu	TCG Ser	GCG Ala 615	TCC Ser	TCG Ser	GTT Val	TAC Tyr 620	AAC Asn	CTG Leu	CTA Leu	CCA Pro	GAA Glu 625	AAG Lys	GAC Asp	CTC Leu	ACT Thr	1927
GGC Gly 630	TTC Phe	CCT Pro	GGG Gly	CCT Pro	TTG Leu	AAT Asn 635	GAC Asp	CAG Gln	GAC Asp	GAT Asp	GAA Glu 640	GAC Asp	TGC Cys	ATC Ile	AAT Asn	1975
CGT Arg 645	CAT His	AAT Asn	GTC Val	TAT Tyr 650	ATT Ile	AAT Asn	GGA Gly	ATC Ile	ACA Thr	TAT Tyr 655	ACT Thr	CCA Pro	GTA Val	TCA Ser	AGT Ser 660	2023
ACA Thr	AAT Asn	GAA Glu	AAG Lys	GAT Asp 665	ATG Met	TAC Tyr	AGC Ser	TTC Phe	CTA Leu 670	GAG Glu	GAC Asp	ATG Met	GGC Gly	TTA Leu 675	AAG Lys	2071
GCA Ala	TTC Phe	ACC Thr	AAC Asn 680	TCA Ser	AAG Lys	ATT Ile	CGT Arg	AAA Lys 685	CCC Pro	AAA Lys	ATG Met	TGT Cys	CCA Pro 690	CAG Gln	CTT Leu	2119

FIG. 13A

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CAA	CAG	TAT	GAA	ATG	CAT	GGA	CCT	GAA	GGT	CTA	CGT	GTA	GGT	TTT	TAT	2167
Gln	Gln	Tyr	Glu	Met	His	Gly	Pro	Glu	Gly	Leu	Arg	Val	Gly	Phe	Tyr	
		695					700					705				
GAG	TCA	GAT	GTA	ATG	GGA	AGA	GGC	CAT	GCA	CGC	CTG	GTG	CAT	GTT	GAA	2215
Glu	Ser	Asp	Val	Met	Gly	Arg	Gly	His	Ala	Arg	Leu	Val	His	Val	Glu	
	710					715					720					
GAG	CCT	CAC	ACG	GAG	ACC	GTA	CGA	AAG	TAC	TTC	CCT	GAG	ACA	TGG	ATC	2263
Glu	Pro	His	Thr	Glu	Thr	Val	Arg	Lys	Tyr	Phe	Pro	Glu	Thr	Trp	Ile	
	725				730					735					740	
TGG	GAT	TTG	GTG	GTG	GTA	AAC	TCA	GCA	GGG	GTG	GCT	GAG	GTA	GGA	GTA	2311
Trp	Asp	Leu	Val	Val	Val	Asn	Ser	Ala	Gly	Val	Ala	Glu	Val	Gly	Val	
				745					750					755		
ACA	GTC	CCT	GAC	ACC	ATC	ACC	GAG	TGG	AAG	GCA	GGG	GCC	TTC	TGC	CTG	2359
Thr	Val	Pro	Asp	Thr	Ile	Thr	Glu	Trp	Lys	Ala	Gly	Ala	Phe	Cys	Leu	
			760					765					770			
TCT	GAA	GAT	GCT	GGA	CTT	GGT	ATC	TCT	TCC	ACT	GCC	TCT	CTC	CGA	GCC	2407
Ser	Glu	Asp	Ala	Gly	Leu	Gly	Ile	Ser	Ser	Thr	Ala	Ser	Leu	Arg	Ala	
		775					780						785			
TTC	CAG	CCC	TTC	TTT	GTG	GAG	CTT	ACA	ATG	CCT	TAC	TCT	GTG	ATT	CGT	2455
Phe	Gln	Pro	Phe	Phe	Val	Glu	Leu	Thr	Met	Pro	Tyr	Ser	Val	Ile	Arg	
	790					795					800					
GGA	GAG	GCC	TTC	ACA	CTC	AAG	GCC	ACG	GTC	CTA	AAC	TAC	CTT	CCC	AAA	2503
Gly	Glu	Ala	Phe	Thr	Leu	Lys	Ala	Thr	Val	Leu	Asn	Tyr	Leu	Pro	Lys	
	805				810					815					820	
TGC	ATC	CGG	GTC	AGT	GTG	CAG	CTG	GAA	GCC	TCT	CCC	GCC	TTC	CTT	GCT	2551
Cys	Ile	Arg	Val	Ser	Val	Gln	Leu	Glu	Ala	Ser	Pro	Ala	Phe	Leu	Ala	
				825					830					835		
GTC	CCA	GTG	GAG	AAG	GAA	CAA	GCG	CCT	CAC	TGC	ATC	TGT	GCA	AAC	GGG	2599
Val	Pro	Val	Glu	Lys	Glu	Gln	Ala	Pro	His	Cys	Ile	Cys	Ala	Asn	Gly	
			840					845					850			
CGG	CAA	ACT	GTG	TCC	TGG	GCA	GTA	ACC	CCA	AAG	TCA	TTA	GGA	AAT	GTG	2647
Arg	Gln	Thr	Val	Ser	Trp	Ala	Val	Thr	Pro	Lys	Ser	Leu	Gly	Asn	Val	
			855				860					865				
AAT	TTC	ACT	GTG	AGC	GCA	GAG	GCA	CTA	GAG	TCT	CAA	GAG	CTG	TGT	GGG	2695
Asn	Phe	Thr	Val	Ser	Ala	Glu	Ala	Leu	Glu	Ser	Gln	Glu	Leu	Cys	Gly	
	870					875					880					
ACT	GAG	GTG	CCT	TCA	GTT	CCT	GAA	CAC	GGA	AGG	AAA	GAC	ACA	GTC	ATC	2743
Thr	Glu	Val	Pro	Ser	Val	Pro	Glu	His	Gly	Arg	Lys	Asp	Thr	Val	Ile	
	885				890					895					900	
AAG	CCT	CTG	TTG	GTT	GAA	CCT	GAA	GGA	CTA	GAG	AAG	GAA	ACA	ACA	TTC	2791
Lys	Pro	Leu	Leu	Val	Glu	Pro	Glu	Gly	Leu	Glu	Lys	Glu	Thr	Thr	Phe	
				905					910					915		
AAC	TCC	CTA	CTT	TGT	CCA	TCA	GGT	GGT	GAG	GTT	TCT	GAA	GAA	TTA	TCC	2839
Asn	Ser	Leu	Leu	Cys	Pro	Ser	Gly	Gly	Glu	Val	Ser	Glu	Glu	Leu	Ser	
				920				925						930		

FIG. 13A

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(Sheet 55 of 91)

CTG AAA CTG CCA CCA AAT GTG GTA GAA GAA TCT GCC CGA GCT TCT GTC	2887
Leu Lys Leu Pro Pro Asn Val Val Glu Glu Ser Ala Arg Ala Ser Val	
935 940 945	
TCA GTT TTG GGA GAC ATA TTA GGC TCT GCC ATG CAA AAC ACA CAA AAT	2935
Ser Val Leu Gly Asp Ile Leu Gly Ser Ala Met Gln Asn Thr Gln Asn	
950 955 960	
CTT CTC CAG ATG CCC TAT GGC TGT GGA GAG CAG AAT ATG GTC CTC TTT	2983
Leu Leu Gln Met Pro Tyr Gly Cys Gly Glu Gln Asn Met Val Leu Phe	
965 970 975 980	
GCT CCT AAC ATC TAT GTA CTG GAT TAT CTA AAT GAA ACA CAG CAG CTT	3031
Ala Pro Asn Ile Tyr Val Leu Asp Tyr Leu Asn Glu Thr Gln Gln Leu	
985 990 995	
ACT CCA GAG GTC AAG TCC AAG GCC ATT GGC TAT CTC AAC ACT GGT TAC	3079
Thr Pro Glu Val Lys Ser Lys Ala Ile Gly Tyr Leu Asn Thr Gly Tyr	
1000 1005 1010	
CAG AGA CAG TTG AAC TAC AAA CAC TAT GAT GGC TCC TAC AGC ACC TTT	3127
Gln Arg Gln Leu Asn Tyr Lys His Tyr Asp Gly Ser Tyr Ser Thr Phe	
1015 1020 1025	
GGG GAG CGA TAT GGC AGG AAC CAG GGC AAC ACC TGG CTC ACA GCC TTT	3175
Gly Glu Arg Tyr Gly Arg Asn Gln Gly Asn Thr Trp Leu Thr Ala Phe	
1030 1035 1040	
GTT CTG AAG ACT TTT GCC CAA GCT CGA GCC TAC ATC TTC ATC GAT GAA	3223
Val Leu Lys Thr Phe Ala Gln Ala Arg Ala Tyr Ile Phe Ile Asp Glu	
1045 1050 1055 1060	
GCA CAC ATT ACC CAA GCC CTC ATA TGG CTC TCC CAG AGG CAG AAG GAC	3271
Ala His Ile Thr Gln Ala Leu Ile Trp Leu Ser Gln Arg Gln Lys Asp	
1065 1070 1075	
AAT GGC TGT TTC AGG AGC TCT GGG TCA CTG CTC AAC AAT GCC ATA AAG	3319
Asn Gly Cys Phe Arg Ser Ser Gly Ser Leu Leu Asn Asn Ala Ile Lys	
1080 1085 1090	
GGA GGA GTA GAA GAT GAA GTG ACC CTC TCC GCC TAT ATC ACC ATC GCC	3367
Gly Gly Val Glu Asp Glu Val Thr Leu Ser Ala Tyr Ile Thr Ile Ala	
1095 1100 1105	
CTT CTG GAG ATT CCT CTC ACA GTC ACT CAC CCT GTT GTC CGC AAT GCC	3415
Leu Leu Glu Ile Pro Leu Thr Val Thr His Pro Val Val Arg Asn Ala	
1110 1115 1120	
CTG TTT TGC CTG GAG TCA GCC TGG AAG ACA GCA CAA GAA GGG GAC CAT	3463
Leu Phe Cys Leu Glu Ser Ala Trp Lys Thr Ala Gln Glu Gly Asp His	
1125 1130 1135 1140	
GGC AGC CAT GTA TAT ACC AAA GCA CTG CTG GCC TAT GCT TTT GCC CTG	3511
Gly Ser His Val Tyr Thr Lys Ala Leu Leu Ala Tyr Ala Phe Ala Leu	
1145 1150 1155	
GCA GGT AAC CAG GAC AAG AGG AAG GAA GTA CTC AAG TCA CTT AAT GAG	3559
Ala Gly Asn Gln Asp Lys Arg Lys Glu Val Leu Lys Ser Leu Asn Glu	
1160 1165 1170	

FIG. 13A

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(Sheet 56 of 91)

GAA GCT GTG AAG AAA GAC AAC TCT GTC CAT TGG GAG CGC CCT CAG AAA Glu Ala Val Lys Lys Asp Asn Ser Val His Trp Glu Arg Pro Gln Lys 1175 1180 1185	3607
CCC AAG GCA CCA GTG GGG CAT TTT TAC GAA CCC CAG GCT CCC TCT GCT Pro Lys Ala Pro Val Gly His Phe Tyr Glu Pro Gln Ala Pro Ser Ala 1190 1195 1200	3655
GAG GTG GAG ATG ACA TCC TAT GTG CTC CTC GCT TAT CTC ACG GCC CAG Glu Val Glu Met Thr Ser Tyr Val Leu Leu Ala Tyr Leu Thr Ala Gln 1205 1210 1215 1220	3703
CCA GCC CCA ACC TCG GAG GAC CTG ACC TCT GCA ACC AAC ATC GTG AAG Pro Ala Pro Thr Ser Glu Asp Leu Thr Ser Ala Thr Asn Ile Val Lys 1225 1230 1235	3751
TGG ATC ACG AAG CAG CAG AAT GCC CAG GGC GGT TTC TCC TCC ACC CAG Trp Ile Thr Lys Gln Gln Asn Ala Gln Gly Gly Phe Ser Ser Thr Gln 1240 1245 1250	3799
GAC ACA GTG GTG GCT CTC CAT GCT CTG TCC AAA TAT GGA GCC GCC ACA Asp Thr Val Val Ala Leu His Ala Leu Ser Lys Tyr Gly Ala Ala Thr 1255 1260 1265	3847
TTT ACC AGG ACT GGG AAG GCT GCA CAG GTG ACT ATC CAG TCT TCA GGG Phe Thr Arg Thr Gly Lys Ala Ala Gln Val Thr Ile Gln Ser Ser Gly 1270 1275 1280	3895
ACA TTT TCC AGC AAA TTC CAA GTG GAC AAC AAC AAT CGC CTG TTA CTG Thr Phe Ser Ser Lys Phe Gln Val Asp Asn Asn Asn Arg Leu Leu Leu 1285 1290 1295 1300	3943
CAG CAG GTC TCA TTG CCA GAG CTG CCT GGG GAA TAC AGC ATG AAA GTG Gln Gln Val Ser Leu Pro Glu Leu Pro Gly Glu Tyr Ser Met Lys Val 1305 1310 1315	3991
ACA GGA GAA GGA TGT GTC TAC CTC CAG ACC TCC TTG AAA TAC AAT ATT Thr Gly Glu Gly Cys Val Tyr Leu Gln Thr Ser Leu Lys Tyr Asn Ile 1320 1325 1330	4039
CTC CCA GAA AAG GAA GAG TTC CCC TTT GCT TTA GGA GTG CAG ACT CTG Leu Pro Glu Lys Glu Glu Phe Pro Phe Ala Leu Gly Val Gln Thr Leu 1335 1340 1345	4087
CCT CAA ACT TGT GAT GAA CCC AAA GCC CAC ACC AGC TTC CAA ATC TCC Pro Gln Thr Cys Asp Glu Pro Lys Ala His Thr Ser Phe Gln Ile Ser 1350 1355 1360	4135
CTA AGT GTC AGT TAC ACA GGG AGC CGC TCT GCC TCC AAC ATG GCG ATC Leu Ser Val Ser Tyr Thr Gly Ser Arg Ser Ala Ser Asn Met Ala Ile 1365 1370 1375 1380	4183
GTT GAT GTG AAG ATG GTC TCT GGC TTC ATT CCC CTG AAG CCA ACA GTG Val Asp Val Lys Met Val Ser Gly Phe Ile Pro Leu Lys Pro Thr Val 1385 1390 1395	4231
AAA ATG CTT GAA AGA TCT AAC CAT GTG AGC CGG ACA GAA GTC AGC AGC Lys Met Leu Glu Arg Ser Asn His Val Ser Arg Thr Glu Val Ser Ser 1400 1405 1410	4279

FIG. 13A

00322T 2605460

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(Sheet 57 of 91)

AAC CAT GTC TTG ATT TAC CTT GAT AAG GTG TCA AAT CAG ACA CTG AGC	4327
Asn His Val Leu Ile Tyr Leu Asp Lys Val Ser Asn Gln Thr Leu Ser	
1415 1420 1425	
TTG TTC TTC ACG GTT CTG CAA GAT GTC CCA GTA AGA GAT CTC AAA CCA	4375
Leu Phe Phe Thr Val Leu Gln Asp Val Pro Val Arg Asp Leu Lys Pro	
1430 1435 1440	
GCC ATA GTG AAA GTC TAT GAT TAC TAC GAG ACG GAT GAG TTT GCA ATC	4423
Ala Ile Val Lys Val Tyr Asp Tyr Tyr Glu Thr Asp Glu Phe Ala Ile	
1445 1450 1455 1460	
GCT GAG TAC AAT GCT CCT TGC AGC AAA GAT CTT GGA AAT GCT TGAAGACCA	4474
Ala Glu Tyr Asn Ala Pro Cys Ser Lys Asp Leu Gly Asn Ala	
1465 1470 1	
CAAGGCTGAA AAGTGCTTTG CTGGAGTCCT GTTCTCTGAG CTCCACAGAA GACACGTGTT	4534
TTTGTATCTT TAAAGACTTG ATGAATAAAC ACTTTTCTG GTC	4577

FIG. 13A

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(She t 58 of 91)

Ser Val Ser Gly Lys Pro Gln Tyr Met Val Leu Val Pro Ser Leu Leu
 1 5 10 15
 His Thr Glu Thr Thr Glu Lys Gly Cys Val Leu Leu Ser Tyr Leu Asn
 20 25 30
 Glu Thr Val Thr Val Ser Ala Ser Leu Glu Ser Val Arg Gly Asn Arg
 35 40 45
 Ser Leu Phe Thr Asp Leu Glu Ala Glu Asn Asp Val Leu His Cys Val
 50 55 60
 Ala Phe Ala Val Pro Lys Ser Ser Ser Asn Glu Glu Val Met Phe Leu
 65 70 75 80
 Thr Val Gln Val Lys Gly Pro Thr Gln Glu Phe Lys Lys Arg Thr Thr
 85 90 95
 Val Met Val Lys Asn Glu Asp Ser Leu Val Phe Val Gln Thr Asp Lys
 100 105 110
 Ser Ile Tyr Lys Pro Gly Gln Thr Val Lys Phe Arg Val Val Ser Met
 115 120 125
 Asp Glu Asn Phe His Pro Leu Asn Glu Leu Ile Pro Leu Val Tyr Ile
 130 135 140
 Gln Asp Pro Lys Gly Asn Arg Ile Ala Gln Trp Gln Ser Phe Gln Leu
 145 150 155 160
 Glu Gly Gly Leu Lys Gln Phe Ser Phe Pro Leu Ser Ser Glu Pro Phe
 165 170 175
 Gln Gly Ser Tyr Lys Val Val Val Gln Lys Lys Ser Gly Gly Arg Thr
 180 185 190
 Glu His Pro Phe Thr Val Glu Glu Phe Val Leu Pro Lys Phe Glu Val
 195 200 205
 Gln Val Thr Val Pro Lys Ile Ile Thr Ile Leu Glu Glu Glu Met Asn
 210 215 220
 Val Ser Val Cys Gly Leu Tyr Thr Tyr Gly Lys Pro Val Pro Gly His
 225 230 235 240
 Val Thr Val Ser Ile Cys Arg Lys Tyr Ser Asp Ala Ser Asp Cys His
 245 250 255
 Gly Glu Asp Ser Gln Ala Phe Cys Glu Lys Phe Ser Gly Gln Leu Asn
 260 265 270
 Ser His Gly Cys Phe Tyr Gln Gln Val Lys Thr Lys Val Phe Gln Leu
 275 280 285
 Lys Arg Lys Glu Tyr Glu Met Lys Leu His Thr Glu Ala Gln Ile Gln
 290 295 300
 Glu Glu Gly Thr Val Val Glu Leu Thr Gly Arg Gln Ser Ser Glu Ile
 305 310 315 320
 Thr Arg Thr Ile Thr Lys Leu Ser Phe Val Lys Val Asp Ser His Phe
 325 330 335
 Arg Gln Gly Ile Pro Phe Phe Gly Gln Val Arg Leu Val Asp Gly Lys
 340 345 350
 Gly Val Pro Ile Pro Asn Lys Val Ile Phe Ile Arg Gly Asn Glu Ala
 355 360 365
 Asn Tyr Tyr Ser Asn Ala Thr Thr Asp Glu His Gly Leu Val Gln Phe
 370 375 380
 Ser Ile Asn Thr Thr Asn Val Met Gly Thr Ser Leu Thr Val Arg Val
 385 390 395 400
 Asn Tyr Lys Asp Arg Ser Pro Cys Tyr Gly Tyr Gln Trp Val Ser Glu
 405 410 415
 Glu His Glu Glu Ala His His Thr Ala Tyr Leu Val Phe Ser Pro Ser
 420 425 430
 Lys Ser Phe Val His Leu Glu Pro Met Ser His Glu Leu Pro Cys Gly
 435 440 445
 His Thr Gln Thr Val Gln Ala His Tyr Ile Leu Asn Gly Gly Thr Leu
 450 455 460
 Leu Gly Leu Lys Lys Leu Ser Phe Tyr Tyr Leu Ile Met Ala Lys Gly

FIG. 13B

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(Sheet 59 of 91)

465					470					475				480
Gly	Ile	Val	Arg	Thr	Gly	Thr	His	Gly	Leu	Leu	Val	Lys	Gln	Glu
				485					490					495
Met	Lys	Gly	His	Phe	Ser	Ile	Ser	Ile	Pro	Val	Lys	Ser	Asp	Ile
			500					505					510	Ala
Pro	Val	Ala	Arg	Leu	Leu	Ile	Tyr	Ala	Val	Leu	Pro	Thr	Gly	Asp
		515					520					525		Val
Ile	Gly	Asp	Ser	Ala	Lys	Tyr	Asp	Val	Glu	Asn	Cys	Leu	Ala	Asn
	530					535					540			Lys
Val	Asp	Leu	Ser	Phe	Ser	Pro	Ser	Gln	Ser	Leu	Pro	Ala	Ser	His
545					550					555				560
His	Leu	Arg	Val	Thr	Ala	Ala	Pro	Gln	Ser	Val	Cys	Ala	Leu	Arg
			565					570						575
Val	Asp	Gln	Ser	Val	Leu	Leu	Met	Lys	Pro	Asp	Ala	Glu	Leu	Ser
		580						585					590	Ala
Ser	Ser	Val	Tyr	Asn	Leu	Leu	Pro	Glu	Lys	Asp	Leu	Thr	Gly	Phe
		595					600					605		Pro
Gly	Pro	Leu	Asn	Asp	Gln	Asp	Asp	Glu	Asp	Cys	Ile	Asn	Arg	His
	610					615					620			Asn
Val	Tyr	Ile	Asn	Gly	Ile	Thr	Tyr	Thr	Pro	Val	Ser	Ser	Thr	Asn
625					630					635				640
Lys	Asp	Met	Tyr	Ser	Phe	Leu	Glu	Asp	Met	Gly	Leu	Lys	Ala	Phe
				645					650					655
Asn	Ser	Lys	Ile	Arg	Lys	Pro	Lys	Met	Cys	Pro	Gln	Leu	Gln	Gln
		660						665					670	Tyr
Glu	Met	His	Gly	Pro	Glu	Gly	Leu	Arg	Val	Gly	Phe	Tyr	Glu	Ser
	675						680					685		Asp
Val	Met	Gly	Arg	Gly	His	Ala	Arg	Leu	Val	His	Val	Glu	Glu	Pro
	690					695					700			His
Thr	Glu	Thr	Val	Arg	Lys	Tyr	Phe	Pro	Glu	Thr	Trp	Ile	Trp	Asp
705					710					715				Leu
Val	Val	Val	Asn	Ser	Ala	Gly	Val	Ala	Glu	Val	Gly	Val	Thr	Val
			725						730					Pro
Asp	Thr	Ile	Thr	Glu	Trp	Lys	Ala	Gly	Ala	Phe	Cys	Leu	Ser	Glu
			740					745					750	Asp
Ala	Gly	Leu	Gly	Ile	Ser	Ser	Thr	Ala	Ser	Leu	Arg	Ala	Phe	Gln
	755						760					765		Pro
Phe	Phe	Val	Glu	Leu	Thr	Met	Pro	Tyr	Ser	Val	Ile	Arg	Gly	Glu
	770					775					780			Ala
Phe	Thr	Leu	Lys	Ala	Thr	Val	Leu	Asn	Tyr	Leu	Pro	Lys	Cys	Ile
785					790					795				Arg
Val	Ser	Val	Gln	Leu	Glu	Ala	Ser	Pro	Ala	Phe	Leu	Ala	Val	Pro
			805						810					Val
Glu	Lys	Glu	Gln	Ala	Pro	His	Cys	Ile	Cys	Ala	Asn	Gly	Arg	Gln
			820					825					830	Thr
Val	Ser	Trp	Ala	Val	Thr	Pro	Lys	Ser	Leu	Gly	Asn	Val	Asn	Phe
	835						840					845		Thr
Val	Ser	Ala	Glu	Ala	Leu	Glu	Ser	Gln	Glu	Leu	Cys	Gly	Thr	Glu
	850						855				860			Val
Pro	Ser	Val	Pro	Glu	His	Gly	Arg	Lys	Asp	Thr	Val	Ile	Lys	Pro
865					870					875				Leu
Leu	Val	Glu	Pro	Glu	Gly	Leu	Glu	Lys	Glu	Thr	Thr	Phe	Asn	Ser
				885					890					Leu
Leu	Cys	Pro	Ser	Gly	Gly	Glu	Val	Ser	Glu	Glu	Leu	Ser	Leu	Lys
			900						905				910	Leu
Pro	Pro	Asn	Val	Val	Glu	Glu	Ser	Ala	Arg	Ala	Ser	Val	Ser	Val
		915					920					925		Leu
Gly	Asp	Ile	Leu	Gly	Ser	Ala	Met	Gln	Asn	Thr	Gln	Asn	Leu	Gln
	930					935					940			

FIG. 13B

Met Pro Tyr Gly Cys Gly Glu Gln Asn Met Val Leu Phe Ala Pro Asn
 945 950 955 960
 Ile Tyr Val Leu Asp Tyr Leu Asn Glu Thr Gln Gln Leu Thr Pro Glu
 965 970 975
 Val Lys Ser Lys Ala Ile Gly Tyr Leu Asn Thr Gly Tyr Gln Arg Gln
 980 985 990
 Leu Asn Tyr Lys His Tyr Asp Gly Ser Tyr Ser Thr Phe Gly Glu Arg
 995 1000 1005
 Tyr Gly Arg Asn Gln Gly Asn Thr Trp Leu Thr Ala Phe Val Leu Lys
 1010 1015 1020
 Thr Phe Ala Gln Ala Arg Ala Tyr Ile Phe Ile Asp Glu Ala His Ile
 025 1030 1035 1040
 Thr Gln Ala Leu Ile Trp Leu Ser Gln Arg Gln Lys Asp Asn Gly Cys
 1045 1050 1055
 Phe Arg Ser Ser Gly Ser Leu Leu Asn Asn Ala Ile Lys Gly Gly Val
 1060 1065 1070
 Glu Asp Glu Val Thr Leu Ser Ala Tyr Ile Thr Ile Ala Leu Leu Glu
 1075 1080 1085
 Ile Pro Leu Thr Val Thr His Pro Val Val Arg Asn Ala Leu Phe Cys
 1090 1095 1100
 Leu Glu Ser Ala Trp Lys Thr Ala Gln Glu Gly Asp His Gly Ser His
 105 1110 1115 1120
 Val Tyr Thr Lys Ala Leu Leu Ala Tyr Ala Phe Ala Leu Ala Gly Asn
 1125 1130 1135
 Gln Asp Lys Arg Lys Glu Val Leu Lys Ser Leu Asn Glu Glu Ala Val
 1140 1145 1150
 Lys Lys Asp Asn Ser Val His Trp Glu Arg Pro Gln Lys Pro Lys Ala
 1155 1160 1165
 Pro Val Gly His Phe Tyr Glu Pro Gln Ala Pro Ser Ala Glu Val Glu
 1170 1175 1180
 Met Thr Ser Tyr Val Leu Leu Ala Tyr Leu Thr Ala Gln Pro Ala Pro
 185 1190 1195 1200
 Thr Ser Glu Asp Leu Thr Ser Ala Thr Asn Ile Val Lys Trp Ile Thr
 1205 1210 1215
 Lys Gln Gln Asn Ala Gln Gly Gly Phe Ser Ser Thr Gln Asp Thr Val
 1220 1225 1230
 Val Ala Leu His Ala Leu Ser Lys Tyr Gly Ala Ala Thr Phe Thr Arg
 1235 1240 1245
 Thr Gly Lys Ala Ala Gln Val Thr Ile Gln Ser Ser Gly Thr Phe Ser
 1250 1255 1260
 Ser Lys Phe Gln Val Asp Asn Asn Asn Arg Leu Leu Leu Gln Gln Val
 265 1270 1275 1280
 Ser Leu Pro Glu Leu Pro Gly Glu Tyr Ser Met Lys Val Thr Gly Glu
 1285 1290 1295
 Gly Cys Val Tyr Leu Gln Thr Ser Leu Lys Tyr Asn Ile Leu Pro Glu
 1300 1305 1310
 Lys Glu Glu Phe Pro Phe Ala Leu Gly Val Gln Thr Leu Pro Gln Thr
 1315 1320 1325
 Cys Asp Glu Pro Lys Ala His Thr Ser Phe Gln Ile Ser Leu Ser Val
 1330 1335 1340
 Ser Tyr Thr Gly Ser Arg Ser Ala Ser Asn Met Ala Ile Val Asp Val
 345 1350 1355 1360
 Lys Met Val Ser Gly Phe Ile Pro Leu Lys Pro Thr Val Lys Met Leu
 1365 1370 1375
 Glu Arg Ser Asn His Val Ser Arg Thr Glu Val Ser Ser Asn His Val
 1380 1385 1390
 Leu Ile Tyr Leu Asp Lys Val Ser Asn Gln Thr Leu Ser Leu Phe Phe
 1395 1400 1405

FIG. 13B

(Sheet 61 of 91)

~~Thr Val Leu Gln Asp Val Pro Val Arg Asp Leu Lys Pro Ala Ile Val~~
~~1410 1415 1420~~
~~Lys Val Tyr Asp Tyr Tyr Glu Thr Asp Glu Phe Ala Ile Ala Glu Tyr~~
~~425 1430 1435 1440~~
~~Asn Ala Pro Cys Ser Lys Asp Leu Gly Asn Ala~~
~~1445 1450~~

[illegible]

FIG. 13B

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(Sheet 62 of 91)

CAGCGGTGCG	AGCTCCAGGC	CCATGCACTG	AGGAGGCGGA	AACAAGGGGA	GGCCCCAGAG	60
CTCCATCAAG	CCCCCTCCAA	AGGCTCCCCT	ACCCGGTCCA	CGCCCCCAC	CCCCCTCCC	120
CGCCTCCTCC	CAATTGTGCA	TTTTTGACAGC	CGGAGGCGGC	TCCGAGATGG	GGCTGTGAGC	180
TTCGCCCCGG	GAGGGGGAAA	GAGCAGCGAG	GAGTGAAGCG	GGGGGGTGGG	GTGAAGGGTT	240
TGGATTTTCG	GGCAGGGGGC	GCACCCCGT	CAGCAGGCCC	TCCCCAAGGG	GCTCGGAACT	300
CTACCTCTTC	ACCCACGCCC	CTGGTGCCT	TTGCCGAAGG	AAAGAATAAG	AACAGAGAAG	360
GAGGAGGGGG	AAAGGAGGAA	AAGGGGGACC	CCCCAACTGG	GGGGGGTGAA	GGAGAGAAGT	420
AGCAGGACCA	GAGGGGAAGG	GGCTGCTGCT	TGCATCAGCC	CACACC	ATG CTG ACC	475
				Met	Leu Thr	
				1		
CCG CCG TTG CTC CTG CTG CTG CCC CTG CTC TCA GCT CTG GTC GCG GCG	523					
Pro Pro Leu Leu Leu Leu Leu Pro Leu Leu Ser Ala Leu Val Ala Ala						
5 10 15						
GCT ATC GAC GCC CCT AAG ACT TGC AGC CCC AAG CAG TTT GCC TGC AGA	571					
Ala Ile Asp Ala Pro Lys Thr Cys Ser Pro Lys Gln Phe Ala Cys Arg						
20 25 30 35						
GAT CAA ATA ACC TGT ATC TCA AAG GGC TGG CGG TGC GAC GGT GAG AGG	619					
Asp Gln Ile Thr Cys Ile Ser Lys Gly Trp Arg Cys Asp Gly Glu Arg						
40 45 50						
GAC TGC CCA GAC GGA TCT GAC GAG GCC CCT GAG ATT TGT CCA CAG AGT	667					
Asp Cys Pro Asp Gly Ser Asp Glu Ala Pro Glu Ile Cys Pro Gln Ser						
55 60 65						
AAG GCC CAG CGA TGC CAG CCA AAC GAG CAT AAC TGC CTG GGT ACT GAG	715					
Lys Ala Gln Arg Cys Gln Pro Asn Glu His Asn Cys Leu Gly Thr Glu						
70 75 80						
CTG TGT GTT CCC ATG TCC CGC CTC TGC AAT GGG GTC CAG GAC TGC ATG	763					
Leu Cys Val Pro Met Ser Arg Leu Cys Asn Gly Val Gln Asp Cys Met						
85 90 95						
GAC GGC TCA GAT GAG GGG CCC CAC TGC CGA GAG CTC CAA GGC AAC TGC	811					
Asp Gly Ser Asp Glu Gly Pro His Cys Arg Glu Leu Gln Gly Asn Cys						
100 105 110 115						
TCT CGC CTG GGC TGC CAG CAC CAT TGT GTC CCC ACA CTC GAT GGG CCC	859					
Ser Arg Leu Gly Cys Gln His His Cys Val Pro Thr Leu Asp Gly Pro						
120 125 130						
ACC TGC TAC TGC AAC AGC AGC TTT CAG CTT CAG GCA GAT GGC AAG ACC	907					
Thr Cys Tyr Cys Asn Ser Ser Phe Gln Leu Gln Ala Asp Gly Lys Thr						
135 140 145						
TGC AAA GAT TTT GAT GAG TGC TCA GTG TAC GGC ACC TGC AGC CAG CTA	955					
Cys Lys Asp Phe Asp Glu Cys Ser Val Tyr Gly Thr Cys Ser Gln Leu						
150 155 160						
TGC ACC AAC ACA GAC GGC TCC TTC ATA TGT GGC TGT GTT GAA GGA TAC	1003					
Cys Thr Asn Thr Asp Gly Ser Phe Ile Cys Gly Cys Val Glu Gly Tyr						
165 170 175						
CTC CTG CAG CCG GAT AAC CGC TCC TGC AAG GCC AAG AAC GAG CCA GTA	1051					
Leu Leu Gln Pro Asp Asn Arg Ser Cys Lys Ala Lys Asn Glu Pro Val						
180 185 190 195						

FIG. 14A

[illegible]

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GAC Asp	CGG Arg	CCC Pro	CCT Pro	GTG Val 200	CTG Leu	TTG Leu	ATA Ile	GCC Ala	AAC Asn 205	TCC Ser	CAG Gln	AAC Asn	ATC Ile	TTG Leu 210	GCC Ala	1099
ACG Thr	TAC Tyr	CTG Leu	AGT Ser 215	GGG Gly	GCC Ala	CAG Gln	GTG Val	TCT Ser 220	ACC Thr	ATC Ile	ACA Thr	CCT Pro	ACG Thr 225	AGC Ser	ACG Thr	1147
CGG Arg	CAG Gln	ACC Thr 230	ACA Thr	GCC Ala	ATG Met	GAC Asp	TTC Phe 235	AGC Ser	TAT Tyr	GCC Ala	AAC Asn	GAG Glu 240	ACC Thr	GTA Val	TGC Cys	1195
TGG Trp	GTG Val 245	CAT His	GTT Val	GGG Gly	GAC Asp	AGT Ser 250	GCT Ala	GCT Ala	CAG Gln	ACG Thr	CAG Gln 255	CTC Leu	AAG Lys	TGT Cys	GCC Ala	1243
CGC Arg 260	ATG Met	CCT Pro	GGC Gly	CTA Leu	AAG Lys 265	GGC Gly	TTC Phe	GTG Val	GAT Asp	GAG Glu 270	CAC His	ACC Thr	ATC Ile	AAC Asn	ATC Ile 275	1291
TCC Ser	CTC Leu	AGT Ser	CTG Leu	CAC His 280	CAC His	GTG Val	GAA Glu	CAG Gln	ATG Met 285	GCC Ala	ATC Ile	GAC Asp	TGG Trp	CTG Leu 290	ACA Thr	1339
GGC Gly	AAC Asn	TTC Phe	TAC Tyr 295	TTT Phe	GTG Val	GAT Asp	GAC Asp	ATC Ile 300	GAT Asp	GAT Asp	AGG Arg	ATC Ile	TTT Phe 305	GTC Val	TGC Cys	1387
AAC Asn	AGA Arg	AAT Asn 310	GGG Gly	GAC Asp	ACA Thr	TGT Cys	GTC Val 315	ACA Thr	TTG Leu	CTA Leu	GAC Asp	CTG Leu 320	GAA Glu	CTC Leu	TAC Tyr	1435
AAC Asn	CCC Pro 325	AAG Lys	GGC Gly	ATT Ile	GCC Ala	CTG Leu 330	GAC Asp	CCT Pro	GCC Ala	ATG Met	GGG Gly 335	AAG Lys	GTG Val	TTT Phe	TTC Phe	1483
ACT Thr 340	GAC Asp	TAT Tyr	GGG Gly	CAG Gln	ATC Ile 345	CCA Pro	AAG Lys	GTG Val	GAA Glu	CGC Arg 350	TGT Cys	GAC Asp	ATG Met	GAT Asp	GGG Gly 355	1531
CAG Gln	AAC Asn	CGC Arg	ACC Thr	AAG Lys 360	CTC Leu	GTC Val	GAC Asp	AGC Ser	AAG Lys 365	ATT Ile	GTG Val	TTT Phe	CCT Pro	CAT His 370	GGC Gly	1579
ATC Ile	ACG Thr	CTG Leu	GAC Asp 375	CTG Leu	GTC Val	AGC Ser	CGC Arg	CTT Leu 380	GTC Val	TAC Tyr	TGG Trp	GCA Ala	GAT Asp 385	GCC Ala	TAT Tyr	1627
CTG Leu	GAC Asp	TAT Tyr 390	ATT Ile	GAA Glu	GTG Val	GTG Val	GAC Asp 395	TAT Tyr	GAG Glu	GGC Gly	AAG Lys	GGC Gly 400	CGC Arg	CAG Gln	ACC Thr	1675
ATC Ile	ATC Ile 405	CAG Gln	GGC Gly	ATC Ile	CTG Leu	ATT Ile 410	GAG Glu	CAC His	CTG Leu	TAC Tyr	GGC Gly 415	CTG Leu	ACT Thr	GTG Val	TTT Phe	1723
GAG Glu 420	AAT Asn	TAT Tyr	CTC Leu	TAT Tyr	GCC Ala 425	ACC Thr	AAC Asn	TCG Ser	GAC Asp	AAT Asn 430	GCC Ala	AAT Asn	GCC Ala	CAG Gln	CAG Gln 435	1771

FIG. 14A

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AAG	ACG	AGT	GTG	ATC	CGT	GTG	AAC	CGC	TTT	AAC	AGC	ACC	GAG	TAC	CAG	1819
Lys	Thr	Ser	Val	Ile	Arg	Val	Asn	Arg	Phe	Asn	Ser	Thr	Glu	Tyr	Gln	
				440					445						450	
GTT	GTC	ACC	CGG	GTG	GAC	AAG	GGT	GGT	GCC	CTC	CAC	ATC	TAC	CAC	CAG	1867
Val	Val	Thr	Arg	Val	Asp	Lys	Gly	Gly	Ala	Leu	His	Ile	Tyr	His	Gln	
			455					460							465	
AGG	CGT	CAG	CCC	CGA	GTG	AGG	AGC	CAT	GCC	TGT	GAA	AAC	GAC	CAG	TAT	1915
Arg	Arg	Gln	Pro	Arg	Val	Arg	Ser	His	Ala	Cys	Glu	Asn	Asp	Gln	Tyr	
			470					475							480	
GGG	AAG	CCG	GGT	GGC	TGC	TCT	GAC	ATC	TGC	CTG	CTG	GCC	AAC	AGC	CAC	1963
Gly	Lys	Pro	Gly	Gly	Cys	Ser	Asp	Ile	Cys	Leu	Leu	Ala	Asn	Ser	His	
			485					490							495	
AAG	GCG	CGG	ACC	TGC	CGC	TGC	CGT	TCC	GGC	TTC	AGC	CTG	GGC	AGT	GAC	2011
Lys	Ala	Arg	Thr	Cys	Arg	Cys	Arg	Ser	Gly	Phe	Ser	Leu	Gly	Ser	Asp	
															515	
GGG	AAG	TCA	TGC	AAG	AAG	CCG	GAG	CAT	GAG	CTG	TTC	CTC	GTG	TAT	GGC	2059
Gly	Lys	Ser	Cys	Lys	Lys	Pro	Glu	His	Glu	Leu	Phe	Leu	Val	Tyr	Gly	
															530	
AAG	GGC	CGG	CCA	GGC	ATC	ATC	CGG	GGC	ATG	GAT	ATG	GGG	GCC	AAG	GTC	2107
Lys	Gly	Arg	Pro	Gly	Ile	Ile	Arg	Gly	Met	Asp	Met	Gly	Ala	Lys	Val	
															545	
CCG	GAT	GAG	CAC	ATG	ATC	CCC	ATT	GAA	AAC	CTC	ATG	AAC	CCC	CGA	GCC	2155
Pro	Asp	Glu	His	Met	Ile	Pro	Ile	Glu	Asn	Leu	Met	Asn	Pro	Arg	Ala	
															560	
CTG	GAC	TTC	CAC	GCT	GAG	ACC	GGC	TTC	ATC	TAC	TTT	GCC	GAC	ACC	ACC	2203
Leu	Asp	Phe	His	Ala	Glu	Thr	Gly	Phe	Ile	Tyr	Phe	Ala	Asp	Thr	Thr	
															575	
AGC	TAC	CTC	ATT	GGC	CGC	CAG	AAG	ATT	GAT	GGC	ACT	GAG	CGG	GAG	ACC	2251
Ser	Tyr	Leu	Ile	Gly	Arg	Gln	Lys	Ile	Asp	Gly	Thr	Glu	Arg	Glu	Thr	
															595	
ATC	CTG	AAG	GAC	GGC	ATC	CAC	AAT	GTG	GAG	GGT	GTG	GCC	GTG	GAC	TGG	2299
Ile	Leu	Lys	Asp	Gly	Ile	His	Asn	Val	Glu	Gly	Val	Ala	Val	Asp	Trp	
															610	
ATG	GGA	GAC	AAT	CTG	TAC	TGG	ACG	GAC	GAT	GGG	CCC	AAA	AAG	ACA	ATC	2347
Met	Gly	Asp	Asn	Leu	Tyr	Trp	Thr	Asp	Asp	Gly	Pro	Lys	Lys	Thr	Ile	
															625	
AGC	GTG	GCC	AGG	CTG	GAG	AAA	GCT	GCT	CAG	ACC	CGC	AAG	ACT	TTA	ATC	2395
Ser	Val	Ala	Arg	Leu	Glu	Lys	Ala	Ala	Gln	Thr	Arg	Lys	Thr	Leu	Ile	
															640	
GAG	GGC	AAA	ATG	ACA	CAC	CCC	AGG	GCT	ATT	GTG	GTG	GAT	CCA	CTC	AAT	2443
Glu	Gly	Lys	Met	Thr	His	Pro	Arg	Ala	Ile	Val	Val	Asp	Pro	Leu	Asn	
															655	
GGG	TGG	ATG	TAC	TGG	ACA	GAC	TGG	GAG	GAG	GAC	CCC	AAG	GAC	AGT	CGG	2491
Gly	Trp	Met	Tyr	Trp	Thr	Asp	Trp	Glu	Glu	Asp	Pro	Lys	Asp	Ser	Arg	
															675	

FIG. 14A

CGT	GGG	CGG	CTG	GAG	AGG	CGG	TGG	ATG	GAT	GGC	TCA	CAC	CGA	GAC	ATC	2539
Arg	Gly	Arg	Leu	Glu	Arg	Ala	Trp	Met	Asp	Gly	Ser	His	Arg	Asp	Ile	
			680						685					690		
TTT	GTC	ACC	TCC	AAG	ACA	GTG	CTT	TGG	CCC	AAT	GGG	CTA	AGC	CTG	GAC	2587
Phe	Val	Thr	Ser	Lys	Thr	Val	Leu	Trp	Pro	Asn	Gly	Leu	Ser	Leu	Asp	
			695					700					705			
ATC	CCG	GCT	GGG	CGC	CTC	TAC	TGG	GTG	GAT	GCC	TTC	TAC	GAC	CGC	ATC	2635
Ile	Pro	Ala	Gly	Arg	Leu	Tyr	Trp	Val	Asp	Ala	Phe	Tyr	Asp	Arg	Ile	
		710					715					720				
GAG	ACG	ATA	CTG	CTC	AAT	GGC	ACA	GAC	CGG	AAG	ATT	GTG	TAT	GAA	GGT	2683
Glu	Thr	Ile	Leu	Leu	Asn	Gly	Thr	Asp	Arg	Lys	Ile	Val	Tyr	Glu	Gly	
	725					730					735					
CCT	GAG	CTG	AAC	CAC	GCC	TTT	GGC	CTG	TGT	CAC	CAT	GGC	AAC	TAC	CTC	2731
Pro	Glu	Leu	Asn	His	Ala	Phe	Gly	Leu	Cys	His	His	Gly	Asn	Tyr	Leu	
	740				745					750					755	
TTC	TGG	ACT	GAG	TAT	CGG	AGT	GGC	AGT	GTC	TAC	CGC	TTG	GAA	CGG	GGT	2779
Phe	Trp	Thr	Glu	Tyr	Arg	Ser	Gly	Ser	Val	Tyr	Arg	Leu	Glu	Arg	Gly	
			760						765					770		
GTA	GGA	GGC	GCA	CCC	CCC	ACT	GTG	ACC	CTT	CTG	CGC	AGT	GAG	CGG	CCC	2827
Val	Gly	Gly	Ala	Pro	Pro	Thr	Val	Thr	Leu	Leu	Arg	Ser	Glu	Arg	Pro	
			775					780					785			
CCC	ATC	TTT	GAG	ATC	CGA	ATG	TAT	GAT	GCC	CAG	CAG	CAG	CAA	GTT	GGC	2875
Pro	Ile	Phe	Glu	Ile	Arg	Met	Tyr	Asp	Ala	Gln	Gln	Gln	Gln	Val	Gly	
		790					795					800				
ACC	AAC	AAA	TGC	CGG	GTG	AAC	AAT	GGC	GGC	TGC	AGC	AGC	CTG	TGC	TTG	2923
Thr	Asn	Lys	Cys	Arg	Val	Asn	Asn	Gly	Gly	Cys	Ser	Ser	Leu	Cys	Leu	
	805					810					815					
GCC	ACC	CCT	GGG	AGC	CGC	CAG	TGC	GCC	TGT	GCT	GAG	GAC	CAG	GTG	TTG	2971
Ala	Thr	Pro	Gly	Ser	Arg	Gln	Cys	Ala	Cys	Ala	Glu	Asp	Gln	Val	Leu	
	820				825				830						835	
GAC	GCA	GAC	GGC	GTC	ACT	TGC	TTG	GCG	AAC	CCA	TCC	TAC	GTG	CCT	CCA	3019
Asp	Ala	Asp	Gly	Val	Thr	Cys	Leu	Ala	Asn	Pro	Ser	Tyr	Val	Pro	Pro	
			840					845						850		
CCC	CAG	TGC	CAG	CCA	GGC	GAG	TTT	GCC	TGT	GCC	AAC	AGC	CGC	TGC	ATC	3067
Pro	Gln	Cys	Gln	Pro	Gly	Glu	Phe	Ala	Cys	Ala	Asn	Ser	Arg	Cys	Ile	
			855					860					865			
CAG	GAG	CGC	TGG	AAG	TGT	GAC	GGA	GAC	AAC	GAT	TGC	CTG	GAC	AAC	AGT	3115
Gln	Glu	Arg	Trp	Lys	Cys	Asp	Gly	Asp	Asn	Asp	Cys	Leu	Asp	Asn	Ser	
		870				875						880				
GAT	GAG	GCC	CCA	GCC	CTC	TGC	CAT	CAG	CAC	ACC	TGC	CCC	TCG	GAC	CGA	3163
Asp	Glu	Ala	Pro	Ala	Leu	Cys	His	Gln	His	Thr	Cys	Pro	Ser	Asp	Arg	
		885				890					895					
TTC	AAG	TGC	GAG	AAC	AAC	CGG	TGC	ATC	CCC	AAC	CGC	TGG	CTC	TGC	GAC	3211
Phe	Lys	Cys	Glu	Asn	Asn	Arg	Cys	Ile	Pro	Asn	Arg	Trp	Leu	Cys	Asp	
					905					910					915	

FIG. 14A

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GGG GAC AAT GAC TGT GGG AAC AGT GAA GAT GAG TCC AAT GCC ACT TGT	3259
Gly Asp Asn Asp Cys Gly Asn Ser Glu Asp Glu Ser Asn Ala Thr Cys	
920 925 930	
TCA GCC CGC ACC TGC CCC CCC AAC CAG TTC TCC TGT GCC AGT GGC CGC	3307
Ser Ala Arg Thr Cys Pro Pro Asn Gln Phe Ser Cys Ala Ser Gly Arg	
935 940 945	
TGC ATC CCC ATC TCC TGG ACG TGT GAT CTG GAT GAC GAC TGT GGC GAC	3355
Cys Ile Pro Ile Ser Trp Thr Cys Asp Leu Asp Asp Asp Cys Gly Asp	
950 955 960	
CGC TCT GAT GAG TCT GCT TCG TGT GCC TAT CCC ACC TGC TTC CCC CTG	3403
Arg Ser Asp Glu Ser Ala Ser Cys Ala Tyr Pro Thr Cys Phe Pro Leu	
965 970 975	
ACT CAG TTT ACC TGC AAC AAT GGC AGA TGT ATC AAC ATC AAC TGG AGA	3451
Thr Gln Phe Thr Cys Asn Asn Gly Arg Cys Ile Asn Ile Asn Trp Arg	
980 985 990 995	
TGC GAC AAT GAC AAT GAC TGT GGG GAC AAC AGT GAC GAA GCC GGC TGC	3499
Cys Asp Asn Asp Asn Asp Cys Gly Asp Asn Ser Asp Glu Ala Gly Cys	
1000 1005 1010	
AGC CAC TCC TGT TCT AGC ACC CAG TTC AAG TGC AAC AGC GGG CGT TGC	3547
Ser His Ser Cys Ser Ser Thr Gln Phe Lys Cys Asn Ser Gly Arg Cys	
1015 1020 1025	
ATC CCC GAG CAC TGG ACC TGC GAT GGG GAC AAT GAC TGC GGA GAC TAC	3595
Ile Pro Glu His Trp Thr Cys Asp Gly Asp Asn Asp Cys Gly Asp Tyr	
1030 1035 1040	
AGT GAT GAG ACA CAC GCC AAC TGC ACC AAC CAG GCC ACG AGG CCC CCT	3643
Ser Asp Glu Thr His Ala Asn Cys Thr Asn Gln Ala Thr Arg Pro Pro	
1045 1050 1055	
GGT GGC TGC CAC ACT GAT GAG TTC CAG TGC CGG CTG GAT GGA CTA TGC	3691
Gly Gly Cys His Thr Asp Glu Phe Gln Cys Arg Leu Asp Gly Leu Cys	
1060 1065 1070 1075	
ATC CCC CTG CGG TGG CGC TGC GAT GGG GAC ACT GAC TGC ATG GAC TCC	3739
Ile Pro Leu Arg Trp Arg Cys Asp Gly Asp Thr Asp Cys Met Asp Ser	
1080 1085 1090	
AGC GAT GAG AAG AGC TGT GAG GGA GTG ACC CAC GTC TGC GAT CCC AGT	3787
Ser Asp Glu Lys Ser Cys Glu Gly Val Thr His Val Cys Asp Pro Ser	
1095 1100 1105	
GTC AAG TTT GGC TGC AAG GAC TCA GCT CGG TGC ATC AGC AAA GCG TGG	3835
Val Lys Phe Gly Cys Lys Asp Ser Ala Arg Cys Ile Ser Lys Ala Trp	
1110 1115 1120	
GTG TGT GAT GGC GAC AAT GAC TGT GAG GAT AAC TCG GAC GAG GAG AAC	3883
Val Cys Asp Gly Asp Asn Asp Cys Glu Asp Asn Ser Asp Glu Glu Asn	
1125 1130 1135	
TGC GAG TCC CTG GCC TGC AGG CCA CCC TCG CAC CCT TGT GCC AAC AAC	3931
Cys Glu Ser Leu Ala Cys Arg Pro Pro Ser His Pro Cys Ala Asn Asn	
1140 1145 1150 1155	

FIG. 14A

003231 2760260

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ACC TCA GTC TGC CTG CCC CCT GAC AAG CTG TGT GAT GGC AAC GAC GAC Thr Ser Val Cys Leu Pro Pro Asp Lys Leu Cys Asp Gly Asn Asp Asp 1160 1165 1170	3979
TGT GGC GAC GGC TCA GAT GAG GGC GAG CTC TGC GAC CAG TGC TCT CTG Cys Gly Asp Gly Ser Asp Glu Gly Glu Leu Cys Asp Gln Cys Ser Leu 1175 1180 1185	4027
AAT AAC GGT GGC TGC AGC CAC AAC TGC TCA GTG GCA CCT GGC GAA GGC Asn Asn Gly Gly Cys Ser His Asn Cys Ser Val Ala Pro Gly Glu Gly 1190 1195 1200	4075
ATT GTG TGT TCC TGC CCT CTG GGC ATG GAG CTG GGG CCC GAC AAC CAC Ile Val Cys Ser Cys Pro Leu Gly Met Glu Leu Gly Pro Asp Asn His 1205 1210 1215	4123
ACC TGC CAG ATC CAG AGC TAC TGT GCC AAG CAT CTC AAA TGC AGC CAA Thr Cys Gln Ile Gln Ser Tyr Cys Ala Lys His Leu Lys Cys Ser Gln 1220 1225 1230 1235	4171
AAG TGC GAC CAG AAC AAG TTC AGC GTG AAG TGC TCC TGC TAC GAG GGC Lys Cys Asp Gln Asn Lys Phe Ser Val Lys Cys Ser Cys Tyr Glu Gly 1240 1245 1250	4219
TGG GTC CTG GAA CCT GAC GGC GAG AGC TGC CGC AGC CTG GAC CCC TTC Trp Val Leu Glu Pro Asp Gly Glu Ser Cys Arg Ser Leu Asp Pro Phe 1255 1260 1265	4267
AAG CCG TTC ATC ATT TTC TCC AAC CGC CAT GAA ATC CGG CGC ATC GAT Lys Pro Phe Ile Ile Phe Ser Asn Arg His Glu Ile Arg Arg Ile Asp 1270 1275 1280	4315
CTT CAC AAA GGA GAC TAC AGC GTC CTG GTG CCC GGC CTG CGC AAC ACC Leu His Lys Gly Asp Tyr Ser Val Leu Val Pro Gly Leu Arg Asn Thr 1285 1290 1295	4363
ATC GCC CTG GAC TTC CAC CTC AGC CAG AGC GCC CTC TAC TGG ACC GAC Ile Ala Leu Asp Phe His Leu Ser Gln Ser Ala Leu Tyr Trp Thr Asp 1300 1305 1310 1315	4411
GTG GTG GAG GAC AAG ATC TAC CGC GGC AAG CTG CTG GAC AAC GGA GCC Val Val Glu Asp Lys Ile Tyr Arg Gly Lys Leu Leu Asp Asn Gly Ala 1320 1325 1330	4459
CTG ACT AGT TTC GAG GTG GTG ATT CAG TAT GGC CTG GCC ACA CCC GAG Leu Thr Ser Phe Glu Val Val Ile Gln Tyr Gly Leu Ala Thr Pro Glu 1335 1340 1345	4507
GGC CTG GCT GTA GAC TGG ATT GCA GGC AAC ATC TAC TGG GTG GAG AGT Gly Leu Ala Val Asp Trp Ile Ala Gly Asn Ile Tyr Trp Val Glu Ser 1350 1355 1360	4555
AAC CTG GAT CAG ATC GAG GTG GCC AAG CTG GAT GGG ACC CTC CGG ACC Asn Leu Asp Gln Ile Glu Val Ala Lys Leu Asp Gly Thr Leu Arg Thr 1365 1370 1375	4603
ACC CTG CTG GCC GGT GAC ATT GAG CAC CCA AGG GCA ATC GCA CTG GAT Thr Leu Leu Ala Gly Asp Ile Glu His Pro Arg Ala Ile Ala Leu Asp 1380 1385 1390 1395	4651

FIG. 14A

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CCC CGG GAT GGG ATC CTG TTT TGG ACA GAC TGG GAT GCC AGC CTG CCC	4699
Pro Arg Asp Gly Ile Leu Phe Trp Thr Asp Trp Asp Ala Ser Leu Pro	
1400 1405 1410	
CGC ATT GAG GCA GCC TCC ATG AGT GGG GCT GGG CGC CGC ACC GTG CAC	4747
Arg Ile Glu Ala Ala Ser Met Ser Gly Ala Gly Arg Arg Thr Val His	
1415 1420 1425	
CGG GAG ACC GGC TCT GGG GGC TGG CCC AAC GGG CTC ACC GTG GAC TAC	4795
Arg Glu Thr Gly Ser Gly Gly Trp Pro Asn Gly Leu Thr Val Asp Tyr	
1430 1435 1440	
CTG GAG AAG CGC ATC CTT TGG ATT GAC GCC AGG TCA GAT GCC ATT TAC	4843
Leu Glu Lys Arg Ile Leu Trp Ile Asp Ala Arg Ser Asp Ala Ile Tyr	
1445 1450 1455	
TCA GCC CGT TAC GAC GGC TCT GGC CAC ATG GAG GTG CTT CGG GGA CAC	4891
Ser Ala Arg Tyr Asp Gly Ser Gly His Met Glu Val Leu Arg Gly His	
1460 1465 1470 1475	
GAG TTC CTG TCG CAC CCG TTT GCA GTG ACG CTG TAC GGG GGG GAG GTC	4939
Glu Phe Leu Ser His Pro Phe Ala Val Thr Leu Tyr Gly Gly Glu Val	
1480 1485 1490	
TAC TGG ACT GAC TGG CGA ACA AAC ACA CTG GCT AAG GCC AAC AAG TGG	4987
Tyr Trp Thr Asp Trp Arg Thr Asn Thr Leu Ala Lys Ala Asn Lys Trp	
1495 1500 1505	
ACC GGC CAC AAT GTC ACC GTG GTA CAG AGG ACC AAC ACC CAG CCC TTT	5035
Thr Gly His Asn Val Thr Val Val Gln Arg Thr Asn Thr Gln Pro Phe	
1510 1515 1520	
GAC CTG CAG GTG TAC CAC CCC TCC CGC CAG CCC ATG GCT CCC AAT CCC	5083
Asp Leu Gln Val Tyr His Pro Ser Arg Gln Pro Met Ala Pro Asn Pro	
1525 1530 1535	
TGT GAG GCC AAT GGG GGC CAG GGC CCC TGC TCC CAC CTG TGT CTC ATC	5131
Cys Glu Ala Asn Gly Gly Gln Gly Pro Cys Ser His Leu Cys Leu Ile	
1540 1545 1550 1555	
AAC TAC AAC CGG ACC GTG TCC TGC GCC TGC CCC CAC CTC ATG AAG CTC	5179
Asn Tyr Asn Arg Thr Val Ser Cys Ala Cys Pro His Leu Met Lys Leu	
1560 1565 1570	
CAC AAG GAC AAC ACC ACC TGC TAT GAG TTT AAG AAG TTC CTG CTG TAC	5227
His Lys Asp Asn Thr Thr Cys Tyr Glu Phe Lys Lys Phe Leu Leu Tyr	
1575 1580 1585	
GCA CGT CAG ATG GAG ATC CGA GGT GTG GAC CTG GAT GCT CCC TAC TAC	5275
Ala Arg Gln Met Glu Ile Arg Gly Val Asp Leu Asp Ala Pro Tyr Tyr	
1590 1595 1600	
AAC TAC ATC ATC TCC TTC ACG GTG CCC GAC ATC GAC AAC GTC ACA GTG	5323
Asn Tyr Ile Ile Ser Phe Thr Val Pro Asp Ile Asp Asn Val Thr Val	
1605 1610 1615	
CTA GAC TAC GAT GCC CGC GAG CAG CGT GTG TAC TGG TCT GAC GTG CGG	5371
Leu Asp Tyr Asp Ala Arg Glu Gln Arg Val Tyr Trp Ser Asp Val Arg	
1620 1625 1630 1635	

FIG. 14A

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ACA CAG GCC ATC AAG CGG GCC TTC ATC AAC GGC ACA GGC GTG GAG ACA	5419
Thr Gln Ala Ile Lys Arg Ala Phe Ile Asn Gly Thr Gly Val Glu Thr	
1640 1645 1650	
GTC GTC TCT GCA GAC TTG CCA AAT GCC CAC GGG CTG GCT GTG GAC TGG	5467
Val Val Ser Ala Asp Leu Pro Asn Ala His Gly Leu Ala Val Asp Trp	
1655 1660 1665	
GTC TCC CGA AAC CTG TTC TGG ACA AGC TAT GAC ACC AAT AAG AAG CAG	5515
Val Ser Arg Asn Leu Phe Trp Thr Ser Tyr Asp Thr Asn Lys Lys Gln	
1670 1675 1680	
ATC AAT GTG GCC CGG CTG GAT GGC TCC TTC AAG AAC GCA GTG GTG CAG	5563
Ile Asn Val Ala Arg Leu Asp Gly Ser Phe Lys Asn Ala Val Val Gln	
1685 1690 1695	
GGC CTG GAG CAG CCC CAT GGC CTT GTC GTC CAC CCT CTG CGT GGG AAG	5611
Gly Leu Glu Gln Pro His Gly Leu Val Val His Pro Leu Arg Gly Lys	
1700 1705 1710 1715	
CTC TAC TGG ACC GAT GGT GAC AAC ATC AGC ATG GCC AAC ATG GAT GGC	5659
Leu Tyr Trp Thr Asp Gly Asp Asn Ile Ser Met Ala Asn Met Asp Gly	
1720 1725 1730	
AGC AAT CGC ACC CTG CTC TTC AGT GGC CAG AAG GGC CCC GTG GGC CTG	5707
Ser Asn Arg Thr Leu Leu Phe Ser Gly Gln Lys Gly Pro Val Gly Leu	
1735 1740 1745	
GCT ATT GAC TTC CCT GAA AGC AAA CTC TAC TGG ATC AGC TCC GGG AAC	5755
Ala Ile Asp Phe Pro Glu Ser Lys Leu Tyr Trp Ile Ser Ser Gly Asn	
1750 1755 1760	
CAT ACC ATC AAC CGC TGC AAC CTG GAT GGG AGT GGG CTG GAG GTC ATC	5803
His Thr Ile Asn Arg Cys Asn Leu Asp Gly Ser Gly Leu Glu Val Ile	
1765 1770 1775	
GAT GCC ATG CGG AGC CAG CTG GGC AAG GCC ACC GCC CTG GCC ATC ATG	5851
Asp Ala Met Arg Ser Gln Leu Gly Lys Ala Thr Ala Leu Ala Ile Met	
1780 1785 1790 1795	
GGG GAC AAG CTG TGG TGG GCT GAT CAG GTG TCG GAA AAG ATG GGC ACA	5899
Gly Asp Lys Leu Trp Trp Ala Asp Gln Val Ser Glu Lys Met Gly Thr	
1800 1805 1810	
TGC AGC AAG GCT GAC GGC TCG GGC TCC GTG GTC CTT CGG AAC AGC ACC	5947
Cys Ser Lys Ala Asp Gly Ser Gly Ser Val Val Leu Arg Asn Ser Thr	
1815 1820 1825	
ACC CTG GTG ATG CAC ATG AAG GTC TAT GAC GAG AGC ATC CAG CTG GAC	5995
Thr Leu Val Met His Met Lys Val Tyr Asp Glu Ser Ile Gln Leu Asp	
1830 1835 1840	
CAT AAG GGC ACC AAC CCC TGC AGT GTC AAC AAC GGT GAC TGC TCC CAG	6043
His Lys Gly Thr Asn Pro Cys Ser Val Asn Asn Gly Asp Cys Ser Gln	
1845 1850 1855	
CTC TGC CTG CCC ACG TCA GAG ACG ACC CGC TCC TGC ATG TGC ACA GCC	6091
Leu Cys Leu Pro Thr Ser Glu Thr Thr Arg Ser Cys Met Cys Thr Ala	
1860 1865 1870 1875	

FIG. 14A

000001 2/600/60

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(Sheet 70 of 91)

GGC TAT AGC CTC CGG AGT GGC CAG CAG GCC TGC GAG GGC GTA GGT TCC Gly Tyr Ser Leu Arg Ser Gly Gln Gln Ala Cys Glu Gly Val Gly Ser 1880 1885 1890	6139
TTT CTC CTG TAC TCT GTG CAT GAG GGA ATC AGG GGA ATT CCC CTG GAT Phe Leu Leu Tyr Ser Val His Glu Gly Ile Arg Gly Ile Pro Leu Asp 1895 1900 1905	6187
CCC AAT GAC AAG TCA GAT GCC CTG GTC CCA GTG TCC GGG ACC TCG CTG Pro Asn Asp Lys Ser Asp Ala Leu Val Pro Val Ser Gly Thr Ser Leu 1910 1915 1920	6235
GCT GTC GGC ATC GAC TTC CAC GCT GAA AAT GAC ACC ATC TAC TGG GTG Ala Val Gly Ile Asp Phe His Ala Glu Asn Asp Thr Ile Tyr Trp Val 1925 1930 1935	6283
GAC ATG GGC CTG AGC ACG ATC AGC CGG GCC AAG CGG GAC CAG ACG TGG Asp Met Gly Leu Ser Thr Ile Ser Arg Ala Lys Arg Asp Gln Thr Trp 1940 1945 1950 1955	6331
CGT GAA GAC GTG GTG ACC AAT GGC ATT GGC CGT GTG GAG GGC ATT GCA Arg Glu Asp Val Val Thr Asn Gly Ile Gly Arg Val Glu Gly Ile Ala 1960 1965 1970	6379
GTG GAC TGG ATC GCA GGC AAC ATC TAC TGG ACA GAC CAG GGC TTT GAT Val Asp Trp Ile Ala Gly Asn Ile Tyr Trp Thr Asp Gln Gly Phe Asp 1975 1980 1985	6427
GTC ATC GAG GTC GCC CGG CTC AAT GGC TCC TTC CGC TAC GTG GTG ATC Val Ile Glu Val Ala Arg Leu Asn Gly Ser Phe Arg Tyr Val Val Ile 1990 1995 2000	6475
TCC CAG GGT CTA GAC AAG CCC CGG GCC ATC ACC GTC CAC CCG GAG AAA Ser Gln Gly Leu Asp Lys Pro Arg Ala Ile Thr Val His Pro Glu Lys 2005 2010 2015	6523
GGG TAC TTG TTC TGG ACT GAG TGG GGT CAG TAT CCG CGT ATT GAG CGG Gly Tyr Leu Phe Trp Thr Glu Trp Gly Gln Tyr Pro Arg Ile Glu Arg 2020 2025 2030 2035	6571
TCT CGG CTA GAT GGC ACG GAG CGT GTG GTG CTG GTC AAC GTC AGC ATC Ser Arg Leu Asp Gly Thr Glu Arg Val Val Leu Val Asn Val Ser Ile 2040 2045 2050	6619
AGC TGG CCC AAC GGC ATC TCA GTG GAC TAC CAG GAT GGG AAG CTG TAC Ser Trp Pro Asn Gly Ile Ser Val Asp Tyr Gln Asp Gly Lys Leu Tyr 2055 2060 2065	6667
TGG TGC GAT GCA CGG ACA GAC AAG ATT GAA CGG ATC GAC CTG GAG ACA Trp Cys Asp Ala Arg Thr Asp Lys Ile Glu Arg Ile Asp Leu Glu Thr 2070 2075 2080	6715
GGT GAG AAC CGC GAG GTG GTT CTG TCC AGC AAC AAC ATG GAC ATG TTT Gly Glu Asn Arg Glu Val Val Leu Ser Ser Asn Met Asp Met Phe 2085 2090 2095	6763
TCA GTG TCT GTG TTT GAG GAT TTC ATC TAC TGG AGT GAC AGG ACT CAT Ser Val Ser Val Phe Glu Asp Phe Ile Tyr Trp Ser Asp Arg Thr His 2100 2105 2110 2115	6811

FIG. 14A

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(Sheet 71 of 91)

GCC AAC GGC TCT ATC AAG CGC GGC AGC AAA GAC AAT GCC ACA GAC TCC Ala Asn Gly Ser Ile Lys Arg Gly Ser Lys Asp Asn Ala Thr Asp Ser 2120 2125 2130	6859
GTG CCC CTG CGA ACC GGC ATC GGC GTC CAG CTT AAA GAC ATC AAA GTC Val Pro Leu Arg Thr Gly Ile Gly Val Gln Leu Lys Asp Ile Lys Val 2135 2140 2145	6907
TTC AAC CGG GAC CGG CAG AAA GGC ACC AAC GTG TGC GCG GTG GCC AAT Phe Asn Arg Asp Arg Gln Lys Gly Thr Asn Val Cys Ala Val Ala Asn 2150 2155 2160	6955
GGC GGC TGC CAG CAG CTG TGC CTG TAC CGG GGC CGT GGG CAG CGG GCC Gly Gly Cys Gln Gln Leu Cys Leu Tyr Arg Gly Arg Gly Gln Arg Ala 2165 2170 2175	7003
TGC GCC TGT GCC CAC GGC ATG CTG GCT GAA GAC GGA GCA TCG TGC CGC Cys Ala Cys Ala His Gly Met Leu Ala Glu Asp Gly Ala Ser Cys Arg 2180 2185 2190 2195	7051
GAG TAT GCC GGC TAC CTG CTC TAC TCA GAG CGC ACC ATT CTC AAG AGT Glu Tyr Ala Gly Tyr Leu Leu Tyr Ser Glu Arg Thr Ile Leu Lys Ser 2200 2205 2210	7099
ATC CAC CTG TCG GAT GAG CGC AAC CTC AAT GCG CCC GTG CAG CCC TTC Ile His Leu Ser Asp Glu Arg Asn Leu Asn Ala Pro Val Gln Pro Phe 2215 2220 2225	7147
GAG GAC CCT GAG CAC ATG AAG AAC GTC ATC GCC CTG GCC TTT GAC TAC Glu Asp Pro Glu His Met Lys Asn Val Ile Ala Leu Ala Phe Asp Tyr 2230 2235 2240	7195
CGG GCA GGC ACC TCT CCG GGC ACC CCC AAT CGC ATC TTC TTC AGC GAC Arg Ala Gly Thr Ser Pro Gly Thr Pro Asn Arg Ile Phe Phe Ser Asp 2245 2250 2255	7243
ATC CAC TTT GGC AAC ATC CAA CAG ATC AAC GAC GAT GGC TCC AGG AGG Ile His Phe Gly Asn Ile Gln Gln Ile Asn Asp Asp Gly Ser Arg Arg 2260 2265 2270 2275	7291
ATC ACC ATT GTG GAA AAC GTG GGC TCC GTG GAA GGC CTG GCC TAT CAC Ile Thr Ile Val Glu Asn Val Gly Ser Val Glu Gly Leu Ala Tyr His 2280 2285 2290	7339
CGT GGC TGG GAC ACT CTC TAT TGG ACA AGC TAC ACG ACA TCC ACC ATC Arg Gly Trp Asp Thr Leu Tyr Trp Thr Ser Tyr Thr Thr Ser Thr Ile 2295 2300 2305	7387
ACG CGC CAC ACA GTG GAC CAG ACC CGC CCA GGG GCC TTC GAG CGT GAG Thr Arg His Thr Val Asp Gln Thr Arg Pro Gly Ala Phe Glu Arg Glu 2310 2315 2320	7435
ACC GTC ATC ACT ATG TCT GGA GAT GAC CAC CCA CGG GCC TTC GTT TTG Thr Val Ile Thr Met Ser Gly Asp Asp His Pro Arg Ala Phe Val Leu 2325 2330 2335	7483
GAC GAG TGC CAG AAC CTC ATG TTC TGG ACC AAC TGG AAT GAG CAG CAT Asp Glu Cys Gln Asn Leu Met Phe Trp Thr Asn Trp Asn Glu Gln His 2340 2345 2350 2355	7531

FIG. 14A

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(Sheet 73 of 91)

GAC GAG ATC CCT TGC AAC AAG ACA GCC TGT GGT GTG GGC GAG TTC CGC	8299
Asp Glu Ile Pro Cys Asn Lys Thr Ala Cys Gly Val Gly Glu Phe Arg	
2600 2605 2610	
TGC CGG GAC GGG ACC TGC ATC GGG AAC TCC AGC CGC TGC AAC CAG TTT	8347
Cys Arg Asp Gly Thr Cys Ile Gly Asn Ser Ser Arg Cys Asn Gln Phe	
2615 2620 2625	
GTG GAT TGT GAG GAC GCC TCA GAT GAG ATG AAC TGC AGT GCC ACC GAC	8395
Val Asp Cys Glu Asp Ala Ser Asp Glu Met Asn Cys Ser Ala Thr Asp	
2630 2635 2640	
TGC AGC AGC TAC TTC CGC CTG GGC GTG AAG GGC GTG CTC TTC CAG CCC	8443
Cys Ser Ser Tyr Phe Arg Leu Gly Val Lys Gly Val Leu Phe Gln Pro	
2645 2650 2655	
TGC GAG CGG ACC TCA CTC TGC TAC GCA CCC AGC TGG GTG TGT GAT GGC	8491
Cys Glu Arg Thr Ser Leu Cys Tyr Ala Pro Ser Trp Val Cys Asp Gly	
2660 2665 2670 2675	
GCC AAT GAC TGT GGG GAC TAC AGT GAT GAG CGC GAC TGC CCA GGT GTG	8539
Ala Asn Asp Cys Gly Asp Tyr Ser Asp Glu Arg Asp Cys Pro Gly Val	
2680 2685 2690	
AAA CGC CCC AGA TGC CCT CTG AAT TAC TTC GCC TGC CCT AGT GGG CGC	8587
Lys Arg Pro Arg Cys Pro Leu Asn Tyr Phe Ala Cys Pro Ser Gly Arg	
2695 2700 2705	
TGC ATC CCC ATG AGC TGG ACG TGT GAC AAA GAG GAT GAC TGT GAA CAT	8635
Cys Ile Pro Met Ser Trp Thr Cys Asp Lys Glu Asp Asp Cys Glu His	
2710 2715 2720	
GGC GAG GAC GAG ACC CAC TGC AAC AAG TTC TGC TCA GAG GCC CAG TTT	8683
Gly Glu Asp Glu Thr His Cys Asn Lys Phe Cys Ser Glu Ala Gln Phe	
2725 2730 2735	
GAG TGC CAG AAC CAT CGC TGC ATC TCC AAG CAG TGG CTG TGT GAC GGC	8731
Glu Cys Gln Asn His Arg Cys Ile Ser Lys Gln Trp Leu Cys Asp Gly	
2740 2745 2750 2755	
AGC GAT GAC TGT GGG GAT GGC TCA GAC GAG GCT GCT CAC TGT GAA GGC	8779
Ser Asp Asp Cys Gly Asp Gly Ser Asp Glu Ala Ala His Cys Glu Gly	
2760 2765 2770	
AAG ACG TGC GGC CCC TCC TCC TTC TCC TGC CCT GGC ACC CAC GTG TGC	8827
Lys Thr Cys Gly Pro Ser Ser Phe Ser Cys Pro Gly Thr His Val Cys	
2775 2780 2785	
GTC CCC GAG CGC TGG CTC TGT GAC GGT GAC AAA GAC TGT GCT GAT GGT	8875
Val Pro Glu Arg Trp Leu Cys Asp Gly Asp Lys Asp Cys Ala Asp Gly	
2790 2795 2800	
GCA GAC GAG AGC ATC GCA GCT GGT TGC TTG TAC AAC AGC ACT TGT GAC	8923
Ala Asp Glu Ser Ile Ala Ala Gly Cys Leu Tyr Asn Ser Thr Cys Asp	
2805 2810 2815	
GAC CGT GAG TTC ATG TGC CAG AAC CGC CAG TGC ATC CCC AAG CAC TTC	8971
Asp Arg Glu Phe Met Cys Gln Asn Arg Gln Cys Ile Pro Lys His Phe	
2820 2825 2830 2835	

FIG. 14A

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(Sheet 74 of 91)

GTG	TGT	GAC	CAC	GAC	CGT	GAC	TGT	GCA	GAT	GGC	TCT	GAT	GAG	TCC	CCC	9019
Val	Cys	Asp	His	Asp	Arg	Asp	Cys	Ala	Asp	Gly	Ser	Asp	Glu	Ser	Pro	
				2840					2845						2850	
GAG	TGT	GAG	TAC	CCG	ACC	TGC	GGC	CCC	AGT	GAG	TTC	CGC	TGT	GCC	AAT	9067
Glu	Cys	Glu	Tyr	Pro	Thr	Cys	Gly	Pro	Ser	Glu	Phe	Arg	Cys	Ala	Asn	
			2855					2860							2865	
GGG	CGC	TGT	CTG	AGC	TCC	CGC	CAG	TGG	GAG	TGT	GAT	GGC	GAG	AAT	GAC	9115
Gly	Arg	Cys	Leu	Ser	Ser	Arg	Gln	Trp	Glu	Cys	Asp	Gly	Glu	Asn	Asp	
			2870					2875							2880	
TGC	CAC	GAC	CAG	AGT	GAC	GAG	GCT	CCC	AAG	AAC	CCA	CAC	TGC	ACC	AGC	9163
Cys	His	Asp	Gln	Ser	Asp	Glu	Ala	Pro	Lys	Asn	Pro	His	Cys	Thr	Ser	
			2885					2890							2895	
CCA	GAG	CAC	AAG	TGC	AAT	GCC	TCG	TCA	CAG	TTC	CTG	TGC	AGC	AGT	GGG	9211
Pro	Glu	His	Lys	Cys	Asn	Ala	Ser	Ser	Gln	Phe	Leu	Cys	Ser	Ser	Gly	
2900					2905					2910					2915	
CGC	TGT	GTG	GCT	GAG	GCA	CTG	CTC	TGC	AAC	GGC	CAG	GAT	GAC	TGT	GGC	9259
Arg	Cys	Val	Ala	Glu	Ala	Leu	Leu	Cys	Asn	Gly	Gln	Asp	Asp	Cys	Gly	
				2920						2925					2930	
GAC	AGC	TCG	GAC	GAG	CGT	GGC	TGC	CAC	ATC	AAT	GAG	TGT	CTC	AGC	CGC	9307
Asp	Ser	Ser	Asp	Glu	Arg	Gly	Cys	His	Ile	Asn	Glu	Cys	Leu	Ser	Arg	
				2935					2940						2945	
AAG	CTC	AGT	GGC	TGC	AGC	CAG	GAC	TGT	GAG	GAC	CTC	AAG	ATC	GGC	TTC	9355
Lys	Leu	Ser	Gly	Cys	Ser	Gln	Asp	Cys	Glu	Asp	Leu	Lys	Ile	Gly	Phe	
			2950					2955							2960	
AAG	TGC	CGC	TGT	CGC	CCT	GGC	TTC	CGG	CTG	AAG	GAT	GAC	GGC	CGG	ACG	9403
Lys	Cys	Arg	Cys	Arg	Pro	Gly	Phe	Arg	Leu	Lys	Asp	Asp	Gly	Arg	Thr	
			2965					2970							2975	
TGT	GCT	GAT	GTG	GAC	GAG	TGC	AGC	ACC	ACC	TTC	CCC	TGC	AGC	CAG	CGC	9451
Cys	Ala	Asp	Val	Asp	Glu	Cys	Ser	Thr	Thr	Phe	Pro	Cys	Ser	Gln	Arg	
2980						2985					2990				2995	
TGC	ATC	AAC	ACC	CAT	GGC	AGC	TAT	AAG	TGT	CTG	TGT	GTG	GAG	GGC	TAT	9499
Cys	Ile	Asn	Thr	His	Gly	Ser	Tyr	Lys	Cys	Leu	Cys	Val	Glu	Gly	Tyr	
				3000						3005					3010	
GCA	CCC	CGC	GGC	GGC	GAC	CCC	CAC	AGC	TGC	AAG	GCT	GTG	ACT	GAC	GAG	9547
Ala	Pro	Arg	Gly	Gly	Asp	Pro	His	Ser	Cys	Lys	Ala	Val	Thr	Asp	Glu	
				3015					3020						3025	
GAA	CCG	TTT	CTG	ATC	TTC	GCC	AAC	CGG	TAC	TAC	CTG	CGC	AAG	CTC	AAC	9595
Glu	Pro	Phe	Leu	Ile	Phe	Ala	Asn	Arg	Tyr	Tyr	Leu	Arg	Lys	Leu	Asn	
			3030					3035							3040	
CTG	GAC	GGG	TCC	AAC	TAC	ACG	TTA	CTT	AAG	CAG	GGC	CTG	AAC	AAC	GCC	9643
Leu	Asp	Gly	Ser	Asn	Tyr	Thr	Leu	Leu	Lys	Gln	Gly	Leu	Asn	Asn	Ala	
			3045					3050							3055	
GTT	GCC	TTG	GAT	TTT	GAC	TAC	CGA	GAG	CAG	ATG	ATC	TAC	TGG	ACA	GAT	9691
Val	Ala	Leu	Asp	Phe	Asp	Tyr	Arg	Glu	Gln	Met	Ile	Tyr	Trp	Thr	Asp	
3060						3065					3070				3075	

FIG. 14A

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GTG ACC ACC CAG GGC AGC ATG ATC CGA AGG ATG CAC CTT AAC GGG AGC	9739
Val Thr Thr Gln Gly Ser Met Ile Arg Arg Met His Leu Asn Gly Ser	
3080 3085 3090	
AAT GTG CAG GTC CTA CAC CGT ACA GGC CTC AGC AAC CCC GAT GGG CTG	9787
Asn Val Gln Val Leu His Arg Thr Gly Leu Ser Asn Pro Asp Gly Leu	
3095 3100 3105	
GCT GTG GAC TGG GTG GGT GGC AAC CTG TAC TGG TGC GAC AAA GGC CGG	9835
Ala Val Asp Trp Val Gly Gly Asn Leu Tyr Trp Cys Asp Lys Gly Arg	
3110 3115 3120	
GAC ACC ATC GAG GTG TCC AAG CTC AAT GGG GCC TAT CGG ACG GTG CTG	9883
Asp Thr Ile Glu Val Ser Lys Leu Asn Gly Ala Tyr Arg Thr Val Leu	
3125 3130 3135	
GTC AGC TCT GGC CTC CGT GAG CCC AGG GCT CTG GTG GTG GAT GTG CAG	9931
Val Ser Ser Gly Leu Arg Glu Pro Arg Ala Leu Val Val Asp Val Gln	
3140 3145 3150 3155	
AAT GGG TAC CTG TAC TGG ACA GAC TGG GGT GAC CAT TCA CTG ATC GGC	9979
Asn Gly Tyr Leu Tyr Trp Thr Asp Trp Gly Asp His Ser Leu Ile Gly	
3160 3165 3170	
CGC ATC GGC ATG GAT GGG TCC AGC CGC AGC GTC ATC GTG GAC ACC AAG	10027
Arg Ile Gly Met Asp Gly Ser Ser Arg Ser Val Ile Val Asp Thr Lys	
3175 3180 3185	
ATC ACA TGG CCC AAT GGC CTG ACG CTG GAC TAT GTC ACT GAG CGC ATC	10075
Ile Thr Trp Pro Asn Gly Leu Thr Leu Asp Tyr Val Thr Glu Arg Ile	
3190 3195 3200	
TAC TGG GCC GAC GCC CGC GAG GAC TAC ATT GAA TTT GCC AGC CTG GAT	10123
Tyr Trp Ala Asp Ala Arg Glu Asp Tyr Ile Glu Phe Ala Ser Leu Asp	
3205 3210 3215	
GGC TCC AAT CGC CAC GTT GTG CTG AGC CAG GAC ATC CCG CAC ATC TTT	10171
Gly Ser Asn Arg His Val Val Leu Ser Gln Asp Ile Pro His Ile Phe	
3220 3225 3230 3235	
GCA CTG ACC CTG TTT GAG GAC TAC GTC TAC TGG ACC GAC TGG GAA ACA	10219
Ala Leu Thr Leu Phe Glu Asp Tyr Val Tyr Trp Thr Asp Trp Glu Thr	
3240 3245 3250	
AAG TCC ATT AAC CGA GCC CAC AAG ACC ACG GGC ACC AAC AAA ACG CTC	10267
Lys Ser Ile Asn Arg Ala His Lys Thr Thr Gly Thr Asn Lys Thr Leu	
3255 3260 3265	
CTC ATC AGC ACG CTG CAC CGG CCC ATG GAC CTG CAT GTC TTC CAT GCC	10315
Leu Ile Ser Thr Leu His Arg Pro Met Asp Leu His Val Phe His Ala	
3270 3275 3280	
CTG CGC CAG CCA GAC GTG CCC AAT CAC CCC TGC AAG GTC AAC AAT GGT	10363
Leu Arg Gln Pro Asp Val Pro Asn His Pro Cys Lys Val Asn Asn Gly	
3285 3290 3295	
GGC TGC AGC AAC CTG TGC CTG CTG TCC CCC GGG GGA GGG CAC AAA TGT	10411
Gly Cys Ser Asn Leu Cys Leu Leu Ser Pro Gly Gly Gly His Lys Cys	
3300 3305 3310 3315	

FIG. 14A

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GCC TGC CCC ACC AAC TTC TAC CTG GGC AGC GAT GGG CGC ACC TGT GTG	10459
Ala Cys Pro Thr Asn Phe Tyr Leu Gly Ser Asp Gly Arg Thr Cys Val	
3320 3325 3330	
TCC AAC TGC ACG GCT AGC CAG TTT GTA TGC AAG AAC GAC AAG TGC ATC	10507
Ser Asn Cys Thr Ala Ser Gln Phe Val Cys Lys Asn Asp Lys Cys Ile	
3335 3340 3345	
CCC TTC TGG TGG AAG TGT GAC ACC GAG GAC GAC TGC GGG GAC CAC TCA	10555
Pro Phe Trp Trp Lys Cys Asp Thr Glu Asp Asp Cys Gly Asp His Ser	
3350 3355 3360	
GAC GAG CCC CCG GAC TGC CCT GAG TTC AAG TGC CGG CCC GGA CAG TTC	10603
Asp Glu Pro Pro Asp Cys Pro Glu Phe Lys Cys Arg Pro Gly Gln Phe	
3365 3370 3375	
CAG TGC TCC ACA GGT ATC TGC ACA AAC CCT GCC TTC ATC TGC GAT GGC	10651
Gln Cys Ser Thr Gly Ile Cys Thr Asn Pro Ala Phe Ile Cys Asp Gly	
3380 3385 3390 3395	
GAC AAT GAC TGC CAG GAC AAC AGT GAC GAG GCC AAC TGT GAC ATC CAC	10699
Asp Asn Asp Cys Gln Asp Asn Ser Asp Glu Ala Asn Cys Asp Ile His	
3400 3405 3410	
GTC TGC TTG CCC AGT CAG TTC AAA TGC ACC AAC ACC AAC CGC TGT ATT	10747
Val Cys Leu Pro Ser Gln Phe Lys Cys Thr Asn Thr Asn Arg Cys Ile	
3415 3420 3425	
CCC GGC ATC TTC CGC TGC AAT GGG CAG GAC AAC TGC GGA GAT GGG GAG	10795
Pro Gly Ile Phe Arg Cys Asn Gly Gln Asp Asn Cys Gly Asp Gly Glu	
3430 3435 3440	
GAT GAG AGG GAC TGC CCC GAG GTG ACC TGC GCC CCC AAC CAG TTC CAG	10843
Asp Glu Arg Asp Cys Pro Glu Val Thr Cys Ala Pro Asn Gln Phe Gln	
3445 3450 3455	
TGC TCC ATT ACC AAA CGG TGC ATC CCC CGG GTC TGG GTC TGC GAC CGG	10891
Cys Ser Ile Thr Lys Arg Cys Ile Pro Arg Val Trp Val Cys Asp Arg	
3460 3465 3470 3475	
GAC AAT GAC TGT GTG GAT GGC AGT GAT GAG CCC GCC AAC TGC ACC CAG	10939
Asp Asn Asp Cys Val Asp Gly Ser Asp Glu Pro Ala Asn Cys Thr Gln	
3480 3485 3490	
ATG ACC TGT GGT GTG GAC GAG TTC CGC TGC AAG GAT TCG GGC CGC TGC	10987
Met Thr Cys Gly Val Asp Glu Phe Arg Cys Lys Asp Ser Gly Arg Cys	
3495 3500 3505	
ATC CCA GCG CGT TGG AAG TGT GAC GGA GAG GAT GAC TGT GGG GAT GGC	11035
Ile Pro Ala Arg Trp Lys Cys Asp Gly Glu Asp Asp Cys Gly Asp Gly	
3510 3515 3520	
TCG GAT GAG CCC AAG GAA GAG TGT GAT GAA CGC ACC TGT GAG CCA TAC	11083
Ser Asp Glu Pro Lys Glu Glu Cys Asp Glu Arg Thr Cys Glu Pro Tyr	
3525 3530 3535	
CAG TTC CGC TGC AAG AAC AAC CGC TGC GTG CCC GGC CGC TGG CAG TGC	11131
Gln Phe Arg Cys Lys Asn Asn Arg Cys Val Pro Gly Arg Trp Gln Cys	
3540 3545 3550 3555	

FIG. 14A

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(Sh et 77 of 91)

GAC TAC GAC AAC GAT TGC GGT GAC AAC TCC GAT GAA GAG AGC TGC ACC	11179
Asp Tyr Asp Asn Asp Cys Gly Asp Asn Ser Asp Glu Glu Ser Cys Thr	
3560 3565 3570	
CCT CGG CCC TGC TCC GAG AGT GAG TTC TCC TGT GCC AAC GGC CGC TGC	11227
Pro Arg Pro Cys Ser Glu Ser Glu Phe Ser Cys Ala Asn Gly Arg Cys	
3575 3580 3585	
ATC GCG GGG CGC TGG AAA TGC GAT GGA GAC CAC GAC TGC GCG GAC GGC	11275
Ile Ala Gly Arg Trp Lys Cys Asp Gly Asp His Asp Cys Ala Asp Gly	
3590 3595 3600	
TCG GAC GAG AAA GAC TGC ACC CCC CGC TGT GAC ATG GAC CAG TTC CAG	11323
Ser Asp Glu Lys Asp Cys Thr Pro Arg Cys Asp Met Asp Gln Phe Gln	
3605 3610 3615	
TGC AAG AGC GGC CAC TGC ATC CCC CTG CGC TGG CGC TGT GAC GCA GAC	11371
Cys Lys Ser Gly His Cys Ile Pro Leu Arg Trp Arg Cys Asp Ala Asp	
3620 3625 3630 3635	
GCC GAC TGC ATG GAC GGC AGC GAC GAG GAG GCC TGC GGC ACT GGC GTG	11419
Ala Asp Cys Met Asp Gly Ser Asp Glu Glu Ala Cys Gly Thr Gly Val	
3640 3645 3650	
CGG ACC TGC CCC CTG GAC GAG TTC CAG TGC AAC AAC ACC TTG TGC AAG	11467
Arg Thr Cys Pro Leu Asp Glu Phe Gln Cys Asn Asn Thr Leu Cys Lys	
3655 3660 3665	
CCG CTG GCC TGG AAG TGC GAT GGC GAG GAT GAC TGT GGG GAC AAC TCA	11515
Pro Leu Ala Trp Lys Cys Asp Gly Glu Asp Asp Cys Gly Asp Asn Ser	
3670 3675 3680	
GAT GAG AAC CCC GAG GAG TGT GCC CGG TTC GTG TGC CCT CCC AAC CGG	11563
Asp Glu Asn Pro Glu Glu Cys Ala Arg Phe Val Cys Pro Pro Asn Arg	
3685 3690 3695	
CCC TTC CGT TGC AAG AAT GAC CGC GTC TGT CTG TGG ATC GGG CGC CAA	11611
Pro Phe Arg Cys Lys Asn Asp Arg Val Cys Leu Trp Ile Gly Arg Gln	
3700 3705 3710 3715	
TGC GAT GGC ACG GAC AAC TGT GGG GAT GGG ACT GAT GAA GAG GAC TGT	11659
Cys Asp Gly Thr Asp Asn Cys Gly Asp Gly Thr Asp Glu Glu Asp Cys	
3720 3725 3730	
GAG CCC CCC ACA GCC CAC ACC ACC CAC TGC AAA GAC AAG AAG GAG TTT	11707
Glu Pro Pro Thr Ala His Thr Thr His Cys Lys Asp Lys Lys Glu Phe	
3735 3740 3745	
CTG TGC CGG AAC CAG CGC TGC CTC TCC TCC TCC CTG CGC TGC AAC ATG	11755
Leu Cys Arg Asn Gln Arg Cys Leu Ser Ser Ser Leu Arg Cys Asn Met	
3750 3755 3760	
TTC GAT GAC TGC GGG GAC GGC TCT GAC GAG GAG GAC TGC AGC ATC GAC	11803
Phe Asp Asp Cys Gly Asp Gly Ser Asp Glu Glu Cys Ser Ile Asp	
3765 3770 3775	
CCC AAG CTG ACC AGC TGC GCC ACC AAT GCC AGC ATC TGT GGG GAC GAG	11851
Pro Lys Leu Thr Ser Cys Ala Thr Asn Ala Ser Ile Cys Gly Asp Glu	
3780 3785 3790 3795	

FIG. 14A

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GCA CGC TGC GTG CGC ACC GAG AAA GCG GCC TAC TGT GCC TGC CGC TCG Ala Arg Cys Val Arg Thr Glu Lys Ala Ala Tyr Cys Ala Cys Arg Ser 3800 3805 3810	11899
GGC TTC CAC ACC GTG CCC GGC CAG CCC GGA TGC CAA GAC ATC AAC GAG Gly Phe His Thr Val Pro Gly Gln Pro Gly Cys Gln Asp Ile Asn Glu 3815 3820 3825	11947
TGC CTG CGC TTC GGC ACC TGC TCC CAG CTC TGC AAC AAC ACC AAG GGC Cys Leu Arg Phe Gly Thr Cys Ser Gln Leu Cys Asn Asn Thr Lys Gly 3830 3835 3840	11995
GGC CAC CTC TGC AGC TGC GCT CGG AAC TTC ATG AAG ACG CAC AAC ACC Gly His Leu Cys Ser Cys Ala Arg Asn Phe Met Lys Thr His Asn Thr 3845 3850 3855	12043
TGC AAG GCC GAA GGC TCT GAG TAC CAG GTC CTG TAC ATC GCT GAT GAC Cys Lys Ala Glu Gly Ser Glu Tyr Gln Val Leu Tyr Ile Ala Asp Asp 3860 3865 3870 3875	12091
AAT GAG ATC CGC AGC CTG TTC CCC GGC CAC CCC CAT TCG GCT TAC GAG Asn Glu Ile Arg Ser Leu Phe Pro Gly His Pro His Ser Ala Tyr Glu 3880 3885 3890	12139
CAG GCA TTC CAG GGT GAC GAG AGT GTC CGC ATT GAT GCT ATG GAT GTC Gln Ala Phe Gln Gly Asp Glu Ser Val Arg Ile Asp Ala Met Asp Val 3895 3900 3905	12187
CAT GTC AAG GCT GGC CGT GTC TAT TGG ACC AAC TGG CAC ACG GGC ACC His Val Lys Ala Gly Arg Val Tyr Trp Thr Asn Trp His Thr Gly Thr 3910 3915 3920	12235
ATC TCC TAC CGC AGC CTG CCA CCT GCT GCG CCT CCT ACC ACT TCC AAC Ile Ser Tyr Arg Ser Leu Pro Pro Ala Ala Pro Thr Thr Ser Asn 3925 3930 3935	12283
CGC CAC CGG CGA CAG ATT GAC CGG GGT GTC ACC CAC CTC AAC ATT TCA Arg His Arg Arg Gln Ile Asp Arg Gly Val Thr His Leu Asn Ile Ser 3940 3945 3950 3955	12331
GGG CTG AAG ATG CCC AGA GGC ATC GCC ATC GAC TGG GTG GCC GGA AAC Gly Leu Lys Met Pro Arg Gly Ile Ala Ile Asp Trp Val Ala Gly Asn 3960 3965 3970	12379
GTG TAC TGG ACC GAC TCG GGC CGA GAT GTG ATT GAG GTG GCG CAG ATG Val Tyr Trp Thr Asp Ser Gly Arg Asp Val Ile Glu Val Ala Gln Met 3975 3980 3985	12427
AAG GGC GAG AAC CGC AAG ACG CTC ATC TCG GGC ATG ATT GAC GAG CCC Lys Gly Glu Asn Arg Lys Thr Leu Ile Ser Gly Met Ile Asp Glu Pro 3990 3995 4000	12475
CAC GCC ATT GTG GTG GAC CCA CTG AGG GGG ACC ATG TAC TGG TCA GAC His Ala Ile Val Val Asp Pro Leu Arg Gly Thr Met Tyr Trp Ser Asp 4005 4010 4015	12523
TGG GGC AAC CAC CCC AAG ATT GAG ACG GCA GCG ATG GAT GGG ACG CTT Trp Gly Asn His Pro Lys Ile Glu Thr Ala Ala Met Asp Gly Thr Leu 4020 4025 4030 4035	12571

FIG. 14A

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CGG GAG ACA CTG GTG CAG GAC AAC ATT CAG TGG CCC ACA GGC CTG GCC	12619
Arg Glu Thr Leu Val Gln Asp Asn Ile Gln Trp Pro Thr Gly Leu Ala	
4040 4045 4050	
GTG GAT TAT CAC AAT GAG CGG CTG TAC TGG GCA GAC GCC AAG CTT TCA	12667
Val Asp Tyr His Asn Glu Arg Leu Tyr Trp Ala Asp Ala Lys Leu Ser	
4055 4060 4065	
GTC ATC GGC AGC ATC CGG CTC AAT GGC ACG GAC CCC ATT GTG GCT GCT	12715
Val Ile Gly Ser Ile Arg Leu Asn Gly Thr Asp Pro Ile Val Ala Ala	
4070 4075 4080	
GAC AGC AAA CGA GGC CTA AGT CAC CCC TTC AGC ATC GAC GTC TTT GAG	12763
Asp Ser Lys Arg Gly Leu Ser His Pro Phe Ser Ile Asp Val Phe Glu	
4085 4090 4095	
GAT TAC ATC TAT GGT GTC ACC TAC ATC AAT AAT CGT GTC TTC AAG ATC	12811
Asp Tyr Ile Tyr Gly Val Thr Tyr Ile Asn Asn Arg Val Phe Lys Ile	
4100 4105 4110 4115	
CAT AAG TTT GGC CAC AGC CCC TTG GTC AAC CTG ACA GGG GGC CTG AGC	12859
His Lys Phe Gly His Ser Pro Leu Val Asn Leu Thr Gly Gly Leu Ser	
4120 4125 4130	
CAC GCC TCT GAC GTG GTC CTT TAC CAT CAG CAC AAG CAG CCC GAA GTG	12907
His Ala Ser Asp Val Val Leu Tyr His Gln His Lys Gln Pro Glu Val	
4135 4140 4145	
ACC AAC CCA TGT GAC CGC AAG AAA TGC GAG TGG CTC TGC CTG CTG AGC	12955
Thr Asn Pro Cys Asp Arg Lys Lys Cys Glu Trp Leu Cys Leu Leu Ser	
4150 4155 4160	
CCC AGT GGG CCT GTC TGC ACC TGT CCC AAT GGG AAG CGG CTG GAC AAC	13003
Pro Ser Gly Pro Val Cys Thr Cys Pro Asn Gly Lys Arg Leu Asp Asn	
4165 4170 4175	
GGC ACA TGC GTG CCT GTG CCC TCT CCA ACG CCC CCC CCA GAT GCT CCC	13051
Gly Thr Cys Val Pro Val Pro Ser Pro Thr Pro Pro Pro Asp Ala Pro	
4180 4185 4190 4195	
CGG CCT GGA ACC TGT AAC CTG CAG TGC TTC AAC GGT GGC AGC TGT TTC	13099
Arg Pro Gly Thr Cys Asn Leu Gln Cys Phe Asn Gly Gly Ser Cys Phe	
4200 4205 4210	
CTC AAT GCA CGG AGG CAG CCC AAG TGC CGC TGC CAA CCC CGC TAC ACG	13147
Leu Asn Ala Arg Arg Gln Pro Lys Cys Arg Cys Gln Pro Arg Tyr Thr	
4215 4220 4225	
GGT GAC AAG TGT GAA CTG GAC CAG TGC TGG GAG CAC TGT CGC AAT GGG	13195
Gly Asp Lys Cys Glu Leu Asp Gln Cys Trp Glu His Cys Arg Asn Gly	
4230 4235 4240	
GGC ACC TGT GCT GCC TCC CCC TCT GGC ATG CCC ACG TGC CGG TGC CCC	13243
Gly Thr Cys Ala Ala Ser Pro Ser Gly Met Pro Thr Cys Arg Cys Pro	
4245 4250 4255	
ACG GGC TTC ACG GGC CCC AAA TGC ACC CAG CAG GTG TGT GCG GGC TAC	13291
Thr Gly Phe Thr Gly Pro Lys Cys Thr Gln Gln Val Cys Ala Gly Tyr	
4260 4265 4270 4275	

FIG. 14A

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(Sheet 80 of 91)

TGT GCC AAC AAC AGC ACC TGC ACT GTC AAC CAG GGC AAC CAG CCC CAG Cys Ala Asn Asn Ser Thr Cys Thr Val Asn Gln Gly Asn Gln Pro Gln	13339
4280 4285 4290	
TGC CGA TGC CTA CCC GGC TTC CTG GGC GAC CGC TGC CAG TAC CGG CAG Cys Arg Cys Leu Pro Gly Phe Leu Gly Asp Arg Cys Gln Tyr Arg Gln	13387
4295 4300 4305	
TGC TCT GGC TAC TGT GAG AAC TTT GGC ACA TGC CAG ATG GCT GCT GAT Cys Ser Gly Tyr Cys Glu Asn Phe Gly Thr Cys Gln Met Ala Ala Asp	13435
4310 4315 4320	
GGC TCC CGA CAA TGC CGC TGC ACT GCC TAC TTT GAG GGA TCG AGG TGT Gly Ser Arg Gln Cys Arg Cys Thr Ala Tyr Phe Glu Gly Ser Arg Cys	13483
4325 4330 4335	
GAG GTG AAC AAG TGC AGC CGC TGT CTC GAA GGG GCC TGT GTG GTC AAC Glu Val Asn Lys Cys Ser Arg Cys Leu Glu Gly Ala Cys Val Val Asn	13531
4340 4345 4350 4355	
AAG CAG AGT GGG GAT GTC ACC TGC AAC TGC ACG GAT GGC CGG GTG GCC Lys Gln Ser Gly Asp Val Thr Cys Asn Cys Thr Asp Gly Arg Val Ala	13579
4360 4365 4370	
CCC AGC TGT CTG ACC TGC GTC GGC CAC TGC AGC AAT GGC GGC TCC TGT Pro Ser Cys Leu Thr Cys Val Gly His Cys Ser Asn Gly Gly Ser Cys	13627
4375 4380 4385	
ACC ATG AAC AGC AAA ATG ATG CCT GAG TGC CAG TGC CCA CCC CAC ATG Thr Met Asn Ser Lys Met Met Pro Glu Cys Gln Cys Pro Pro His Met	13675
4390 4395 4400	
ACA GGG CCC CGG TGT GAG GAG CAC GTC TTC AGC CAG CAG CAG CCA GGA Thr Gly Pro Arg Cys Glu Glu His Val Phe Ser Gln Gln Gln Pro Gly	13723
4405 4410 4415	
CAT ATA GCC TCC ATC CTA ATC CCT CTG CTG TTG CTG CTG CTG CTG GTT His Ile Ala Ser Ile Leu Ile Pro Leu Leu Leu Leu Leu Leu Leu Val	13771
4420 4425 4430 4435	
CTG GTG GCC GGA GTG GTA TTC TGG TAT AAG CGG CGA GTC CAA GGG GCT Leu Val Ala Gly Val Val Phe Trp Tyr Lys Arg Arg Val Gln Gly Ala	13819
4440 4445 4450	
AAG GGC TTC CAG CAC CAA CGG ATG ACC AAC GGG GCC ATG AAC GTG GAG Lys Gly Phe Gln His Gln Arg Met Thr Asn Gly Ala Met Asn Val Glu	13867
4455 4460 4465	
ATT GGA AAC CCC ACC TAC AAG ATG TAC GAA GGC GGA GAG CCT GAT GAT Ile Gly Asn Pro Thr Tyr Lys Met Tyr Glu Gly Gly Glu Pro Asp Asp	13915
4470 4475 4480	
GTG GGA GGC CTA CTG GAC GCT GAC TTT GCC CTG GAC CCT GAC AAG CCC Val Gly Gly Leu Leu Asp Ala Asp Phe Ala Leu Asp Pro Asp Lys Pro	13963
4485 4490 4495	
ACC AAC TTC ACC AAC CCC GTG TAT GCC ACA CTC TAC ATG GGG GGC CAT Thr Asn Phe Thr Asn Pro Val Tyr Ala Thr Leu Tyr Met Gly Gly His	14011
4500 4505 4510 4515	

FIG. 14A

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(Sh et 81 of 91)

GGC AGT CGC CAC TCC CTG GCC AGC ACG GAC GAG AAG CGA GAA CTC CTG 14059
 Gly Ser Arg His Ser Leu Ala Ser Thr Asp Glu Lys Arg Glu Leu Leu
 4520 4525 4530

GGC CGG GGC CCT GAG GAC GAG ATA GGG GAC CCC TTG GCA TAGGGCCCTG CC 14110
 CCGTCGGACT GCGCCAGAA AGCCTCCTGC CCCCTGCCGG TGAAGTCCTT CAGTGAGCCC 14170
 Gly Arg Gly Pro Glu Asp Glu Ile Gly Asp Pro Leu Ala
 4535 4540

CTCCCCAGCC	AGCCCTTCCC	TGGCCCCGCC	GGATGTATAA	ATGTAAAAAT	GAAGGAATTA	14230
CATTTTATAT	GTGAGCGAGC	AAGCCGGCAA	GCGAGCACAG	TATTATTTCT	CCATCCCCCTC	14290
CCTGCCTGCT	CCTTGGCACC	CCCATGCTGC	CTTCAGGGAG	ACAGGCAGGG	AGGGCTTGCG	14350
GCTGCACCTC	CTACCCTCCC	ACCAGAACGC	ACCCCACTGG	GAGAGCTGGT	GGTGCAGCCT	14410
TCCCCTCCCT	GTATAAGACA	CTTTGCCAAG	GCTCTCCCCCT	CTCGCCCCAT	CCCTGCTTGC	14470
CCGCTCCAC	AGCTTCCTGA	GGGCTAATTC	TGGGAAGGGA	GAGTTCTTTG	CTGCCCCCTGT	14530
CTGGAAGACG	TGGCTCTGGG	TGAGGTAGGC	GGGAAAGGAT	GGAGTGTTTT	AGTTCTTGCG	14590
GGAGGCCACC	CCAAACCCCA	GCCCCAACTC	CAGGGGCACC	TATGAGATGG	CCATGCTCAA	14650
CCCCCTCCC	AGACAGGCCC	TCCCTGTCTC	CAGGGCCCCC	ACCGAGGTTT	CCAGGGCTGG	14710
AGACTTCCTC	TGGTAAACAT	TCCTCCAGCC	TCCCCTCCCC	TGGGGACGCC	AAGGAGGTGG	14770
GCCACACCCA	GGAAGGGAAA	GCGGGCAGCC	CCGTTTTGGG	GACGTGAACG	TTTTAATAAT	14830
TTTGTCTGAA	TTCTTTACAA	CTAAATAACA	CAGATATTCT	TATAAATAAA	ATTGTAAAAA	14890
AAAAAA						14896

FIG. 14A

8449-134

(Sh et 82 of 91)

Met Leu Thr Pro Pro Leu Leu Leu Leu Leu Pro Leu Leu Ser Ala Leu
 1 5 10 15
 Val Ala Ala Ala Ile Asp Ala Pro Lys Thr Cys Ser Pro Lys Gln Phe
 20 25 30
 Ala Cys Arg Asp Gln Ile Thr Cys Ile Ser Lys Gly Trp Arg Cys Asp
 35 40 45
 Gly Glu Arg Asp Cys Pro Asp Gly Ser Asp Glu Ala Pro Glu Ile Cys
 50 55 60
 Pro Gln Ser Lys Ala Gln Arg Cys Gln Pro Asn Glu His Asn Cys Leu
 65 70 75 80
 Gly Thr Glu Leu Cys Val Pro Met Ser Arg Leu Cys Asn Gly Val Gln
 85 90 95
 Asp Cys Met Asp Gly Ser Asp Glu Gly Pro His Cys Arg Glu Leu Gln
 100 105 110
 Gly Asn Cys Ser Arg Leu Gly Cys Gln His His Cys Val Pro Thr Leu
 115 120 125
 Asp Gly Pro Thr Cys Tyr Cys Asn Ser Ser Phe Gln Leu Gln Ala Asp
 130 135 140
 Gly Lys Thr Cys Lys Asp Phe Asp Glu Cys Ser Val Tyr Gly Thr Cys
 145 150 155 160
 Ser Gln Leu Cys Thr Asn Thr Asp Gly Ser Phe Ile Cys Gly Cys Val
 165 170 175
 Glu Gly Tyr Leu Leu Gln Pro Asp Asn Arg Ser Cys Lys Ala Lys Asn
 180 185 190
 Glu Pro Val Asp Arg Pro Pro Val Leu Leu Ile Ala Asn Ser Gln Asn
 195 200 205
 Ile Leu Ala Thr Tyr Leu Ser Gly Ala Gln Val Ser Thr Ile Thr Pro
 210 215 220
 Thr Ser Thr Arg Gln Thr Thr Ala Met Asp Phe Ser Tyr Ala Asn Glu
 225 230 235 240
 Thr Val Cys Trp Val His Val Gly Asp Ser Ala Ala Gln Thr Gln Leu
 245 250 255
 Lys Cys Ala Arg Met Pro Gly Leu Lys Gly Phe Val Asp Glu His Thr
 260 265 270
 Ile Asn Ile Ser Leu Ser Leu His His Val Glu Gln Met Ala Ile Asp
 275 280 285
 Trp Leu Thr Gly Asn Phe Tyr Phe Val Asp Asp Ile Asp Asp Arg Ile
 290 295 300
 Phe Val Cys Asn Arg Asn Gly Asp Thr Cys Val Thr Leu Leu Asp Leu
 305 310 315 320
 Glu Leu Tyr Asn Pro Lys Gly Ile Ala Leu Asp Pro Ala Met Gly Lys
 325 330 335
 Val Phe Phe Thr Asp Tyr Gly Gln Ile Pro Lys Val Glu Arg Cys Asp
 340 345 350
 Met Asp Gly Gln Asn Arg Thr Lys Leu Val Asp Ser Lys Ile Val Phe
 355 360 365
 Pro His Gly Ile Thr Leu Asp Leu Val Ser Arg Leu Val Tyr Trp Ala
 370 375 380
 Asp Ala Tyr Leu Asp Tyr Ile Glu Val Val Asp Tyr Glu Gly Lys Gly
 385 390 395 400
 Arg Gln Thr Ile Ile Gln Gly Ile Leu Ile Glu His Leu Tyr Gly Leu
 405 410 415
 Thr Val Phe Glu Asn Tyr Leu Tyr Ala Thr Asn Ser Asp Asn Ala Asn
 420 425 430
 Ala Gln Gln Lys Thr Ser Val Ile Arg Val Asn Arg Phe Asn Ser Thr
 435 440 445
 Glu Tyr Gln Val Val Thr Arg Val Asp Lys Gly Gly Ala Leu His Ile
 450 455 460

FIG. 14B

8449-134

(Sh et 83 of 91)

Tyr His Gln Arg Arg Gln Pro Arg Val Arg Ser His Ala Cys Glu Asn
 465 470 475 480
 Asp Gln Tyr Gly Lys Pro Gly Gly Cys Ser Asp Ile Cys Leu Leu Ala
 485 490 495
 Asn Ser His Lys Ala Arg Thr Cys Arg Cys Arg Ser Gly Phe Ser Leu
 500 505 510
 Gly Ser Asp Gly Lys Ser Cys Lys Lys Pro Glu His Glu Leu Phe Leu
 515 520 525
 Val Tyr Gly Lys Gly Arg Pro Gly Ile Ile Arg Gly Met Asp Met Gly
 530 535 540
 Ala Lys Val Pro Asp Glu His Met Ile Pro Ile Glu Asn Leu Met Asn
 545 550 555 560
 Pro Arg Ala Leu Asp Phe His Ala Glu Thr Gly Phe Ile Tyr Phe Ala
 565 570 575
 Asp Thr Thr Ser Tyr Leu Ile Gly Arg Gln Lys Ile Asp Gly Thr Glu
 580 585 590
 Arg Glu Thr Ile Leu Lys Asp Gly Ile His Asn Val Glu Gly Val Ala
 595 600 605
 Val Asp Trp Met Gly Asp Asn Leu Tyr Trp Thr Asp Asp Gly Pro Lys
 610 615 620
 Lys Thr Ile Ser Val Ala Arg Leu Glu Lys Ala Ala Gln Thr Arg Lys
 625 630 635 640
 Thr Leu Ile Glu Gly Lys Met Thr His Pro Arg Ala Ile Val Val Asp
 645 650 655
 Pro Leu Asn Gly Trp Met Tyr Trp Thr Asp Trp Glu Glu Asp Pro Lys
 660 665 670
 Asp Ser Arg Arg Gly Arg Leu Glu Arg Ala Trp Met Asp Gly Ser His
 675 680 685
 Arg Asp Ile Phe Val Thr Ser Lys Thr Val Leu Trp Pro Asn Gly Leu
 690 695 700
 Ser Leu Asp Ile Pro Ala Gly Arg Leu Tyr Trp Val Asp Ala Phe Tyr
 705 710 715 720
 Asp Arg Ile Glu Thr Ile Leu Leu Asn Gly Thr Asp Arg Lys Ile Val
 725 730 735
 Tyr Glu Gly Pro Glu Leu Asn His Ala Phe Gly Leu Cys His His Gly
 740 745 750
 Asn Tyr Leu Phe Trp Thr Glu Tyr Arg Ser Gly Ser Val Tyr Arg Leu
 755 760 765
 Glu Arg Gly Val Gly Gly Ala Pro Pro Thr Val Thr Leu Leu Arg Ser
 770 775 780
 Glu Arg Pro Pro Ile Phe Glu Ile Arg Met Tyr Asp Ala Gln Gln Gln
 785 790 795 800
 Gln Val Gly Thr Asn Lys Cys Arg Val Asn Asn Gly Gly Cys Ser Ser
 805 810 815
 Leu Cys Leu Ala Thr Pro Gly Ser Arg Gln Cys Ala Cys Ala Glu Asp
 820 825 830
 Gln Val Leu Asp Ala Asp Gly Val Thr Cys Leu Ala Asn Pro Ser Tyr
 835 840 845
 Val Pro Pro Pro Gln Cys Gln Pro Gly Glu Phe Ala Cys Ala Asn Ser
 850 855 860
 Arg Cys Ile Gln Glu Arg Trp Lys Cys Asp Gly Asp Asn Asp Cys Leu
 865 870 875 880
 Asp Asn Ser Asp Glu Ala Pro Ala Leu Cys His Gln His Thr Cys Pro
 885 890 895
 Ser Asp Arg Phe Lys Cys Glu Asn Asn Arg Cys Ile Pro Asn Arg Trp
 900 905 910
 Leu Cys Asp Gly Asp Asn Asp Cys Gly Asn Ser Glu Asp Glu Ser Asn
 915 920 925

FIG. 14B

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(Sheet 84 of 91)

Ala Thr Cys Ser Ala Arg Thr Cys Pro Pro Asn Gln Phe Ser Cys Ala
 930 935 940
 Ser Gly Arg Cys Ile Pro Ile Ser Trp Thr Cys Asp Leu Asp Asp Asp
 945 950 955 960
 Cys Gly Asp Arg Ser Asp Glu Ser Ala Ser Cys Ala Tyr Pro Thr Cys
 965 970 975
 Phe Pro Leu Thr Gln Phe Thr Cys Asn Asn Gly Arg Cys Ile Asn Ile
 980 985 990
 Asn Trp Arg Cys Asp Asn Asp Asn Asp Cys Gly Asp Asn Ser Asp Glu
 995 1000 1005
 Ala Gly Cys Ser His Ser Cys Ser Ser Thr Gln Phe Lys Cys Asn Ser
 1010 1015 1020
 Gly Arg Cys Ile Pro Glu His Trp Thr Cys Asp Gly Asp Asn Asp Cys
 1025 1030 1035 1040
 Gly Asp Tyr Ser Asp Glu Thr His Ala Asn Cys Thr Asn Gln Ala Thr
 1045 1050 1055
 Arg Pro Pro Gly Cys His Thr Asp Glu Phe Gln Cys Arg Leu Asp
 1060 1065 1070
 Gly Leu Cys Ile Pro Leu Arg Trp Arg Cys Asp Gly Asp Thr Asp Cys
 1075 1080 1085
 Met Asp Ser Ser Asp Glu Lys Ser Cys Glu Gly Val Thr His Val Cys
 1090 1095 1100
 Asp Pro Ser Val Lys Phe Gly Cys Lys Asp Ser Ala Arg Cys Ile Ser
 1105 1110 1115 1120
 Lys Ala Trp Val Cys Asp Gly Asp Asn Asp Cys Glu Asp Asn Ser Asp
 1125 1130 1135
 Glu Glu Asn Cys Glu Ser Leu Ala Cys Arg Pro Pro Ser His Pro Cys
 1140 1145 1150
 Ala Asn Asn Thr Ser Val Cys Leu Pro Pro Asp Lys Leu Cys Asp Gly
 1155 1160 1165
 Asn Asp Asp Cys Glv Asp Gly Ser Asp Glu Gly Glu Leu Cys Asp Gln
 1170 1175 1180
 Cys Ser Leu Asn Asn Gly Gly Cys Ser His Asn Cys Ser Val Ala Pro
 1185 1190 1195 1200
 Gly Glu Gly Ile Val Cys Ser Cys Pro Leu Gly Met Glu Leu Gly Pro
 1205 1210 1215
 Asp Asn His Thr Cys Gln Ile Gln Ser Tyr Cys Ala Lys His Leu Lys
 1220 1225 1230
 Cys Ser Gln Lys Cys Asp Gln Asn Lys Phe Ser Val Lys Cys Ser Cys
 1235 1240 1245
 Tyr Glu Gly Trp Val Leu Glu Pro Asp Gly Glu Ser Cys Arg Ser Leu
 1250 1255 1260
 Asp Pro Phe Lys Pro Phe Ile Ile Phe Ser Asn Arg His Glu Ile Arg
 1265 1270 1275 1280
 Arg Ile Asp Leu His Lys Gly Asp Tyr Ser Val Leu Val Pro Gly Leu
 1285 1290 1295
 Arg Asn Thr Ile Ala Leu Asp Phe His Leu Ser Gln Ser Ala Leu Tyr
 1300 1305 1310
 Trp Thr Asp Val Val Glu Asp Lys Ile Tyr Arg Gly Lys Leu Leu Asp
 1315 1320 1325
 Asn Gly Ala Leu Thr Ser Phe Glu Val Val Ile Gln Tyr Gly Leu Ala
 1330 1335 1340
 Thr Pro Glu Gly Leu Ala Val Asp Trp Ile Ala Gly Asn Ile Tyr Trp
 1345 1350 1355 1360
 Val Glu Ser Asn Leu Asp Gln Ile Glu Val Ala Lys Leu Asp Gly Thr
 1365 1370 1375
 Leu Arg Thr Thr Leu Leu Ala Gly Asp Ile Glu His Pro Arg Ala Ile
 1380 1385 1390

FIG. 14B

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(Sheet 85 of 91)

Ala Leu Asp Pro Arg Asp Gly Ile Leu Phe Trp Thr Asp Trp Asp Ala
 1395 1400 1405
 Ser Leu Pro Arg Ile Glu Ala Ala Ser Met Ser Gly Ala Gly Arg Arg
 1410 1415 1420
 Thr Val His Arg Glu Thr Gly Ser Gly Gly Trp Pro Asn Gly Leu Thr
 425 1430 1435 1440
 Val Asp Tyr Leu Glu Lys Arg Ile Leu Trp Ile Asp Ala Arg Ser Asp
 1445 1450 1455
 Ala Ile Tyr Ser Ala Arg Tyr Asp Gly Ser Gly His Met Glu Val Leu
 1460 1465 1470
 Arg Gly His Glu Phe Leu Ser His Pro Phe Ala Val Thr Leu Tyr Gly
 1475 1480 1485
 Gly Glu Val Tyr Trp Thr Asp Trp Arg Thr Asn Thr Leu Ala Lys Ala
 1490 1495 1500
 Asn Lys Trp Thr Gly His Asn Val Thr Val Val Gln Arg Thr Asn Thr
 505 1510 1515 1520
 Gln Pro Phe Asp Leu Gln Val Tyr His Pro Ser Arg Gln Pro Met Ala
 1525 1530 1535
 Pro Asn Pro Cys Glu Ala Asn Gly Gly Gln Gly Pro Cys Ser His Leu
 1540 1545 1550
 Cys Leu Ile Asn Tyr Asn Arg Thr Val Ser Cys Ala Cys Pro His Leu
 1555 1560 1565
 Met Lys Leu His Lys Asp Asn Thr Thr Cys Tyr Glu Phe Lys Lys Phe
 1570 1575 1580
 Leu Leu Tyr Ala Arg Gln Met Glu Ile Arg Gly Val Asp Leu Asp Ala
 585 1590 1595 1600
 Pro Tyr Tyr Asn Tyr Ile Ile Ser Phe Thr Val Pro Asp Ile Asp Asn
 1605 1610 1615
 Val Thr Val Leu Asp Tyr Asp Ala Arg Glu Gln Arg Val Tyr Trp Ser
 1620 1625 1630
 Asp Val Arg Thr Gln Ala Ile Lys Arg Ala Phe Ile Asn Gly Thr Gly
 1635 1640 1645
 Val Glu Thr Val Val Ser Ala Asp Leu Pro Asn Ala His Gly Leu Ala
 1650 1655 1660
 Val Asp Trp Val Ser Arg Asn Leu Phe Trp Thr Ser Tyr Asp Thr Asn
 665 1670 1675 1680
 Lys Lys Gln Ile Asn Val Ala Arg Leu Asp Gly Ser Phe Lys Asn Ala
 1685 1690 1695
 Val Val Gln Gly Leu Glu Gln Pro His Gly Leu Val Val His Pro Leu
 1700 1705 1710
 Arg Gly Lys Leu Tyr Trp Thr Asp Gly Asp Asn Ile Ser Met Ala Asn
 1715 1720 1725
 Met Asp Gly Ser Asn Arg Thr Leu Leu Phe Ser Gly Gln Lys Gly Pro
 1730 1735 1740
 Val Gly Leu Ala Ile Asp Phe Pro Glu Ser Lys Leu Tyr Trp Ile Ser
 745 1750 1755 1760
 Ser Gly Asn His Thr Ile Asn Arg Cys Asn Leu Asp Gly Ser Gly Leu
 1765 1770 1775
 Glu Val Ile Asp Ala Met Arg Ser Gln Leu Gly Lys Ala Thr Ala Leu
 1780 1785 1790
 Ala Ile Met Gly Asp Lys Leu Trp Trp Ala Asp Gln Val Ser Glu Lys
 1795 1800 1805
 Met Gly Thr Cys Ser Lys Ala Asp Gly Ser Gly Ser Val Val Leu Arg
 1810 1815 1820
 Asn Ser Thr Thr Leu Val Met His Met Lys Val Tyr Asp Glu Ser Ile
 825 1830 1835 1840
 Gln Leu Asp His Lys Gly Thr Asn Pro Cys Ser Val Asn Asn Gly Asp
 1845 1850 1855
 Cys Ser Gln Leu Cys Leu Pro Thr Ser Glu Thr Thr Arg Ser Cys Met

FIG. 14B

1860 1865 1870
 Cys Thr Ala Gly Tyr Ser Leu Arg Ser Gly Gln Gln Ala Cys Glu Gly
 1875 1880 1885
 Val Gly Ser Phe Leu Leu Tyr Ser Val His Glu Gly Ile Arg Gly Ile
 1890 1895 1900
 Pro Leu Asp Pro Asn Asp Lys Ser Asp Ala Leu Val Pro Val Ser Gly
 905 1910 1915 1920
 Thr Ser Leu Ala Val Gly Ile Asp Phe His Ala Glu Asn Asp Thr Ile
 1925 1930 1935
 Tyr Trp Val Asp Met Gly Leu Ser Thr Ile Ser Arg Ala Lys Arg Asp
 1940 1945 1950
 Gln Thr Trp Arg Glu Asp Val Val Thr Asn Gly Ile Gly Arg Val Glu
 1955 1960 1965
 Gly Ile Ala Val Asp Trp Ile Ala Gly Asn Ile Tyr Trp Thr Asp Gln
 1970 1975 1980
 Gly Phe Asp Val Ile Glu Val Ala Arg Leu Asn Gly Ser Phe Arg Tyr
 985 1990 1995 2000
 Val Val Ile Ser Gln Gly Leu Asp Lys Pro Arg Ala Ile Thr Val His
 2005 2010 2015
 Pro Glu Lys Gly Tyr Leu Phe Trp Thr Glu Trp Gly Gln Tyr Pro Arg
 2020 2025 2030
 Ile Glu Arg Ser Arg Leu Asp Gly Thr Glu Arg Val Val Leu Val Asn
 2035 2040 2045
 Val Ser Ile Ser Trp Pro Asn Gly Ile Ser Val Asp Tyr Gln Asp Gly
 2050 2055 2060
 Lys Leu Tyr Trp Cys Asp Ala Arg Thr Asp Lys Ile Glu Arg Ile Asp
 065 2070 2075 2080
 Leu Glu Thr Gly Glu Asn Arg Glu Val Val Leu Ser Ser Asn Asn Met
 2085 2090 2095
 Asp Met Phe Ser Val Ser Val Phe Glu Asp Phe Ile Tyr Trp Ser Asp
 2100 2105 2110
 Arg Thr His Ala Asn Gly Ser Ile Lys Arg Gly Ser Lys Asp Asn Ala
 2115 2120 2125
 Thr Asp Ser Val Pro Leu Arg Thr Gly Ile Gly Val Gln Leu Lys Asp
 2130 2135 2140
 Ile Lys Val Phe Asn Arg Asp Arg Gln Lys Gly Thr Asn Val Cys Ala
 145 2150 2155 2160
 Val Ala Asn Gly Gly Cys Gln Gln Leu Cys Leu Tyr Arg Gly Arg Gly
 2165 2170 2175
 Gln Arg Ala Cys Ala Cys Ala His Gly Met Leu Ala Glu Asp Gly Ala
 2180 2185 2190
 Ser Cys Arg Glu Tyr Ala Gly Tyr Leu Leu Tyr Ser Glu Arg Thr Ile
 2195 2200 2205
 Leu Lys Ser Ile His Leu Ser Asp Glu Arg Asn Leu Asn Ala Pro Val
 2210 2215 2220
 Gln Pro Phe Glu Asp Pro Glu His Met Lys Asn Val Ile Ala Leu Ala
 225 2230 2235 2240
 Phe Asp Tyr Arg Ala Gly Thr Ser Pro Gly Thr Pro Asn Arg Ile Phe
 2245 2250 2255
 Phe Ser Asp Ile His Phe Gly Asn Ile Gln Gln Ile Asn Asp Asp Gly
 2260 2265 2270
 Ser Arg Arg Ile Thr Ile Val Glu Asn Val Gly Ser Val Glu Gly Leu
 2275 2280 2285
 Ala Tyr His Arg Gly Trp Asp Thr Leu Tyr Trp Thr Ser Tyr Thr Thr
 2290 2295 2300
 Ser Thr Ile Thr Arg His Thr Val Asp Gln Thr Arg Pro Gly Ala Phe
 305 2310 2315 2320
 Glu Arg Glu Thr Val Ile Thr Met Ser Gly Asp Asp His Pro Arg Ala
 2325 2330 2335

FIG. 14B

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(Sh et 87 of 91)

Phe Val Leu Asp Glu Cys Gln Asn Leu Met Phe Trp Thr Asn Trp Asn
 2340 2345 2350
 Glu Gln His Pro Ser Ile Met Arg Ala Ala Leu Ser Gly Ala Asn Val
 2355 2360 2365
 Leu Thr Leu Ile Glu Lys Asp Ile Arg Thr Pro Asn Gly Leu Ala Ile
 2370 2375 2380
 Asp His Arg Ala Glu Lys Leu Tyr Phe Ser Asp Ala Thr Leu Asp Lys
 385 2390 2395 2400
 Ile Glu Arg Cys Glu Tyr Asp Gly Ser His Arg Tyr Val Ile Leu Lys
 2405 2410 2415
 Ser Glu Pro Val His Pro Phe Gly Leu Ala Val Tyr Gly Glu His Ile
 2420 2425 2430
 Phe Trp Thr Asp Trp Val Arg Arg Ala Val Gln Arg Ala Asn Lys His
 2435 2440 2445
 Val Gly Ser Asn Met Lys Leu Arg Val Asp Ile Pro Gln Gln Pro
 2450 2455 2460
 Met Gly Ile Ile Ala Val Ala Asn Asp Thr Asn Ser Cys Glu Leu Ser
 465 2470 2475 2480
 Pro Cys Arg Ile Asn Asn Gly Gly Cys Gln Asp Leu Cys Leu Leu Thr
 2485 2490 2495
 His Gln Gly His Val Asn Cys Ser Cys Arg Gly Gly Arg Ile Leu Gln
 2500 2505 2510
 Asp Asp Leu Thr Cys Arg Ala Val Asn Ser Ser Cys Arg Ala Gln Asp
 2515 2520 2525
 Glu Phe Glu Cys Ala Asn Gly Glu Cys Ile Asn Phe Ser Leu Thr Cys
 2530 2535 2540
 Asp Gly Val Pro His Cys Lys Asp Lys Ser Asp Glu Lys Pro Ser Tyr
 545 2550 2555 2560
 Cys Asn Ser Arg Arg Cys Lys Lys Thr Phe Arg Gln Cys Ser Asn Gly
 2565 2570 2575
 Arg Cys Val Ser Asn Met Leu Trp Cys Asn Gly Ala Asp Asp Cys Gly
 2580 2585 2590
 Asp Gly Ser Asp Glu Ile Pro Cys Asn Lys Thr Ala Cys Gly Val Gly
 2595 2600 2605
 Glu Phe Arg Cys Arg Asp Gly Thr Cys Ile Gly Asn Ser Ser Arg Cys
 2610 2615 2620
 Asn Gln Phe Val Asp Cys Glu Asp Ala Ser Asp Glu Met Asn Cys Ser
 625 2630 2635 2640
 Ala Thr Asp Cys Ser Tyr Phe Arg Leu Gly Val Lys Gly Val Leu
 2645 2650 2655
 Phe Gln Pro Cys Glu Arg Thr Ser Leu Cys Tyr Ala Pro Ser Trp Val
 2660 2665 2670
 Cys Asp Gly Ala Asn Asp Cys Gly Asp Tyr Ser Asp Glu Arg Asp Cys
 2675 2680 2685
 Pro Gly Val Lys Arg Pro Arg Cys Pro Leu Asn Tyr Phe Ala Cys Pro
 2690 2695 2700
 Ser Gly Arg Cys Ile Pro Met Ser Trp Thr Cys Asp Lys Glu Asp Asp
 705 2710 2715 2720
 Cys Glu His Gly Glu Asp Glu Thr His Cys Asn Lys Phe Cys Ser Glu
 2725 2730 2735
 Ala Gln Phe Glu Cys Gln Asn His Arg Cys Ile Ser Lys Gln Trp Leu
 2740 2745 2750
 Cys Asp Gly Ser Asp Asp Cys Gly Asp Gly Ser Asp Glu Ala Ala His
 2755 2760 2765
 Cys Glu Gly Lys Thr Cys Gly Pro Ser Ser Phe Ser Cys Pro Gly Thr
 2770 2775 2780
 His Val Cys Val Pro Glu Arg Trp Leu Cys Asp Gly Asp Lys Asp Cys
 785 2790 2795 2800
 Ala Asp Gly Ala Asp Glu Ser Ile Ala Ala Gly Cys Leu Tyr Asn Ser

FIG. 14B

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2805 2810 2815
 Thr Cys Asp Asp Arg Glu Phe Met Cys Gln Asn Arg Gln Cys Ile Pro
 2820 2825 2830
 Lys His Phe Val Cys Asp His Asp Arg Asp Cys Ala Asp Gly Ser Asp
 2835 2840 2845
 Glu Ser Pro Glu Cys Glu Tyr Pro Thr Cys Gly Pro Ser Glu Phe Arg
 2850 2855 2860
 Cys Ala Asn Gly Arg Cys Leu Ser Ser Arg Gln Trp Glu Cys Asp Gly
 865 2870 2875 2880
 Glu Asn Asp Cys His Asp Gln Ser Asp Glu Ala Pro Lys Asn Pro His
 2885 2890 2895
 Cys Thr Ser Pro Glu His Lys Cys Asn Ala Ser Ser Gln Phe Leu Cys
 2900 2905 2910
 Ser Ser Gly Arg Cys Val Ala Glu Ala Leu Leu Cys Asn Gly Gln Asp
 2915 2920 2925
 Asp Cys Gly Asp Ser Ser Asp Glu Arg Gly Cys His Ile Asn Glu Cys
 2930 2935 2940
 Leu Ser Arg Lys Leu Ser Gly Cys Ser Gln Asp Cys Glu Asp Leu Lys
 945 2950 2955 2960
 Ile Gly Phe Lys Cys Arg Cys Arg Pro Gly Phe Arg Leu Lys Asp Asp
 2965 2970 2975
 Gly Arg Thr Cys Ala Asp Val Asp Glu Cys Ser Thr Thr Phe Pro Cys
 2980 2985 2990
 Ser Gln Arg Cys Ile Asn Thr His Gly Ser Tyr Lys Cys Leu Cys Val
 2995 3000 3005
 Glu Gly Tyr Ala Pro Arg Gly Gly Asp Pro His Ser Cys Lys Ala Val
 3010 3015 3020
 Thr Asp Glu Glu Pro Phe Leu Ile Phe Ala Asn Arg Tyr Tyr Leu Arg
 025 3030 3035 3040
 Lys Leu Asn Leu Asp Gly Ser Asn Tyr Thr Leu Leu Lys Gln Gly Leu
 3045 3050 3055
 Asn Asn Ala Val Ala Leu Asp Phe Asp Tyr Arg Glu Gln Met Ile Tyr
 3060 3065 3070
 Trp Thr Asp Val Thr Thr Gln Gly Ser Met Ile Arg Arg Met His Leu
 3075 3080 3085
 Asn Gly Ser Asn Val Gln Val Leu His Arg Thr Gly Leu Ser Asn Pro
 3090 3095 3100
 Asp Gly Leu Ala Val Asp Trp Val Gly Gly Asn Leu Tyr Trp Cys Asp
 105 3110 3115 3120
 Lys Gly Arg Asp Thr Ile Glu Val Ser Lys Leu Asn Gly Ala Tyr Arg
 3125 3130 3135
 Thr Val Leu Val Ser Ser Gly Leu Arg Glu Pro Arg Ala Leu Val Val
 3140 3145 3150
 Asp Val Gln Asn Gly Tyr Leu Tyr Trp Thr Asp Trp Gly Asp His Ser
 3155 3160 3165
 Leu Ile Gly Arg Ile Gly Met Asp Gly Ser Ser Arg Ser Val Ile Val
 3170 3175 3180
 Asp Thr Lys Ile Thr Trp Pro Asn Gly Leu Thr Leu Asp Tyr Val Thr
 185 3190 3195 3200
 Glu Arg Ile Tyr Trp Ala Asp Ala Arg Glu Asp Tyr Ile Glu Phe Ala
 3205 3210 3215
 Ser Leu Asp Gly Ser Asn Arg His Val Val Leu Ser Gln Asp Ile Pro
 3220 3225 3230
 His Ile Phe Ala Leu Thr Leu Phe Glu Asp Tyr Val Tyr Trp Thr Asp
 3235 3240 3245
 Trp Glu Thr Lys Ser Ile Asn Arg Ala His Lys Thr Thr Gly Thr Asn
 3250 3255 3260
 Lys Thr Leu Leu Ile Ser Thr Leu His Arg Pro Met Asp Leu His Val
 265 3270 3275 3280

FIG. 14B

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Phe His Ala Leu Arg Gln Pro Asp Val Pro Asn His Pro Cys Lys Val
 3285 3290 3295
 Asn Asn Gly Gly Cys Ser Asn Leu Cys Leu Leu Ser Pro Gly Gly Gly
 3300 3305 3310
 His Lys Cys Ala Cys Pro Thr Asn Phe Tyr Leu Gly Ser Asp Gly Arg
 3315 3320 3325
 Thr Cys Val Ser Asn Cys Thr Ala Ser Gln Phe Val Cys Lys Asn Asp
 3330 3335 3340
 Lys Cys Ile Pro Phe Trp Trp Lys Cys Asp Thr Glu Asp Asp Cys Gly
 345 3350 3355 3360
 Asp His Ser Asp Glu Pro Pro Asp Cys Pro Glu Phe Lys Cys Arg Pro
 3365 3370 3375
 Gly Gln Phe Gln Cys Ser Thr Gly Ile Cys Thr Asn Pro Ala Phe Ile
 3380 3385 3390
 Cys Asp Gly Asp Asn Asp Cys Gln Asp Asn Ser Asp Glu Ala Asn Cys
 3395 3400 3405
 Asp Ile His Val Cys Leu Pro Ser Gln Phe Lys Cys Thr Asn Thr Asn
 3410 3415 3420
 Arg Cys Ile Pro Gly Ile Phe Arg Cys Asn Gly Gln Asp Asn Cys Gly
 425 3430 3435 3440
 Asp Gly Glu Asp Glu Arg Asp Cys Pro Glu Val Thr Cys Ala Pro Asn
 3445 3450 3455
 Gln Phe Gln Cys Ser Ile Thr Lys Arg Cys Ile Pro Arg Val Trp Val
 3460 3465 3470
 Cys Asp Arg Asp Asn Asp Cys Val Asp Gly Ser Asp Glu Pro Ala Asn
 3475 3480 3485
 Cys Thr Gln Met Thr Cys Gly Val Asp Glu Phe Arg Cys Lys Asp Ser
 3490 3495 3500
 Gly Arg Cys Ile Pro Ala Arg Trp Lys Cys Asp Gly Glu Asp Asp Cys
 505 3510 3515 3520
 Gly Asp Gly Ser Asp Glu Pro Lys Glu Glu Cys Asp Glu Arg Thr Cys
 3525 3530 3535
 Glu Pro Tyr Gln Phe Arg Cys Lys Asn Arg Cys Val Pro Gly Arg
 3540 3545 3550
 Trp Gln Cys Asp Tyr Asp Asn Asp Cys Gly Asp Asn Ser Asp Glu Glu
 3555 3560 3565
 Ser Cys Thr Pro Arg Pro Cys Ser Glu Ser Glu Phe Ser Cys Ala Asn
 3570 3575 3580
 Gly Arg Cys Ile Ala Gly Arg Trp Lys Cys Asp Gly Asp His Asp Cys
 585 3590 3595 3600
 Ala Asp Gly Ser Asp Glu Lys Asp Cys Thr Pro Arg Cys Asp Met Asp
 3605 3610 3615
 Gln Phe Gln Cys Lys Ser Gly His Cys Ile Pro Leu Arg Trp Arg Cys
 3620 3625 3630
 Asp Ala Asp Ala Asp Cys Met Asp Gly Ser Asp Glu Glu Ala Cys Gly
 3635 3640 3645
 Thr Gly Val Arg Thr Cys Pro Leu Asp Glu Phe Gln Cys Asn Asn Thr
 3650 3655 3660
 Leu Cys Lys Pro Leu Ala Trp Lys Cys Asp Gly Glu Asp Asp Cys Gly
 665 3670 3675 3680
 Asp Asn Ser Asp Glu Asn Pro Glu Glu Cys Ala Arg Phe Val Cys Pro
 3685 3690 3695
 Pro Asn Arg Pro Phe Arg Cys Lys Asn Asp Arg Val Cys Leu Trp Ile
 3700 3705 3710
 Gly Arg Gln Cys Asp Gly Thr Asp Asn Cys Gly Asp Gly Thr Asp Glu
 3715 3720 3725
 Glu Asp Cys Glu Pro Pro Thr Ala His Thr Thr His Cys Lys Asp Lys
 3730 3735 3740
 Lys Glu Phe Leu Cys Arg Asn Gln Arg Cys Leu Ser Ser Ser Leu Arg

FIG. 14B

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745 3750 3755 3760
 Cys Asn Met Phe Asp Asp Cys Gly Asp Gly Ser Asp Glu Glu Asp Cys
 3765 3770 3775
 Ser Ile Asp Pro Lys Leu Thr Ser Cys Ala Thr Asn Ala Ser Ile Cys
 3780 3785 3790
 Gly Asp Glu Ala Arg Cys Val Arg Thr Glu Lys Ala Ala Tyr Cys Ala
 3795 3800 3805
 Cys Arg Ser Gly Phe His Thr Val Pro Gly Gln Pro Gly Cys Gln Asp
 3810 3815 3820
 Ile Asn Glu Cys Leu Arg Phe Gly Thr Cys Ser Gln Leu Cys Asn Asn
 825 3830 3835 3840
 Thr Lys Gly Gly His Leu Cys Ser Cys Ala Arg Asn Phe Met Lys Thr
 3845 3850 3855
 His Asn Thr Cys Lys Ala Glu Gly Ser Glu Tyr Gln Val Leu Tyr Ile
 3860 3865 3870
 Ala Asp Asp Asn Glu Ile Arg Ser Leu Phe Pro Gly His Pro His Ser
 3875 3880 3885
 Ala Tyr Glu Gln Ala Phe Gln Gly Asp Glu Ser Val Arg Ile Asp Ala
 3890 3895 3900
 Met Asp Val His Val Lys Ala Gly Arg Val Tyr Trp Thr Asn Trp His
 905 3910 3915 3920
 Thr Gly Thr Ile Ser Tyr Arg Ser Leu Pro Pro Ala Ala Pro Pro Thr
 3925 3930 3935
 Thr Ser Asn Arg His Arg Arg Gln Ile Asp Arg Gly Val Thr His Leu
 3940 3945 3950
 Asn Ile Ser Gly Leu Lys Met Pro Arg Gly Ile Ala Ile Asp Trp Val
 3955 3960 3965
 Ala Gly Asn Val Tyr Trp Thr Asp Ser Gly Arg Asp Val Ile Glu Val
 3970 3975 3980
 Ala Gln Met Lys Gly Glu Asn Arg Lys Thr Leu Ile Ser Gly Met Ile
 985 3990 3995 4000
 Asp Glu Pro His Ala Ile Val Val Asp Pro Leu Arg Gly Thr Met Tyr
 4005 4010 4015
 Trp Ser Asp Trp Gly Asn His Pro Lys Ile Glu Thr Ala Ala Met Asp
 4020 4025 4030
 Gly Thr Leu Arg Glu Thr Leu Val Gln Asp Asn Ile Gln Trp Pro Thr
 4035 4040 4045
 Gly Leu Ala Val Asp Tyr His Asn Glu Arg Leu Tyr Trp Ala Asp Ala
 4050 4055 4060
 Lys Leu Ser Val Ile Gly Ser Ile Arg Leu Asn Gly Thr Asp Pro Ile
 065 4070 4075 4080
 Val Ala Ala Asp Ser Lys Arg Gly Leu Ser His Pro Phe Ser Ile Asp
 4085 4090 4095
 Val Phe Glu Asp Tyr Ile Tyr Gly Val Thr Tyr Ile Asn Asn Arg Val
 4100 4105 4110
 Phe Lys Ile His Lys Phe Gly His Ser Pro Leu Val Asn Leu Thr Gly
 4115 4120 4125
 Gly Leu Ser His Ala Ser Asp Val Val Leu Tyr His Gln His Lys Gln
 4130 4135 4140
 Pro Glu Val Thr Asn Pro Cys Asp Arg Lys Lys Cys Glu Trp Leu Cys
 145 4150 4155 4160
 Leu Leu Ser Pro Ser Gly Pro Val Cys Thr Cys Pro Asn Gly Lys Arg
 4165 4170 4175
 Leu Asp Asn Gly Thr Cys Val Pro Val Pro Ser Pro Thr Pro Pro Pro
 4180 4185 4190
 Asp Ala Pro Arg Pro Gly Thr Cys Asn Leu Gln Cys Phe Asn Gly Gly
 4195 4200 4205
 Ser Cys Phe Leu Asn Ala Arg Arg Gln Pro Lys Cys Arg Cys Gln Pro
 4210 4215 4220

FIG. 14B

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Arg	Tyr	Thr	Gly	Asp	Lys	Cys	Glu	Leu	Asp	Gln	Cys	Trp	Glu	His	Cys
225					4230					4235					4240
Arg	Asn	Gly	Gly	Thr	Cys	Ala	Ala	Ser	Pro	Ser	Gly	Met	Pro	Thr	Cys
				4245					4250						4255
Arg	Cys	Pro	Thr	Gly	Phe	Thr	Gly	Pro	Lys	Cys	Thr	Gln	Gln	Val	Cys
			4260				4265						4270		
Ala	Gly	Tyr	Cys	Ala	Asn	Asn	Ser	Thr	Cys	Thr	Val	Asn	Gln	Gly	Asn
	4275						4280				4285				
Gln	Pro	Gln	Cys	Arg	Cys	Leu	Pro	Gly	Phe	Leu	Gly	Asp	Arg	Cys	Gln
4290					4295					4300					
Tyr	Arg	Gln	Cys	Ser	Gly	Tyr	Cys	Glu	Asn	Phe	Gly	Thr	Cys	Gln	Met
305				4310					4315						4320
Ala	Ala	Asp	Gly	Ser	Arg	Gln	Cys	Arg	Cys	Thr	Ala	Tyr	Phe	Glu	Gly
			4325				4330							4335	
Ser	Arg	Cys	Glu	Val	Asn	Lys	Cys	Ser	Arg	Cys	Leu	Glu	Gly	Ala	Cys
		4340					4345					4350			
Val	Val	Asn	Lys	Gln	Ser	Gly	Asp	Val	Thr	Cys	Asn	Cys	Thr	Asp	Gly
		4355				4360				4365					
Arg	Val	Ala	Pro	Ser	Cys	Leu	Thr	Cys	Val	Gly	His	Cys	Ser	Asn	Gly
4370					4375					4380					
Gly	Ser	Cys	Thr	Met	Asn	Ser	Lys	Met	Met	Pro	Glu	Cys	Gln	Cys	Pro
385				4390					4395						4400
Pro	His	Met	Thr	Gly	Pro	Arg	Cys	Glu	Glu	His	Val	Phe	Ser	Gln	Gln
			4405						4410					4415	
Gln	Pro	Gly	His	Ile	Ala	Ser	Ile	Leu	Ile	Pro	Leu	Leu	Leu	Leu	Leu
		4420					4425					4430			
Leu	Leu	Val	Leu	Val	Ala	Gly	Val	Val	Phe	Trp	Tyr	Lys	Arg	Arg	Val
		4435				4440					4445				
Gln	Gly	Ala	Lys	Gly	Phe	Gln	His	Gln	Arg	Met	Thr	Asn	Gly	Ala	Met
4450					4455					4460					
Asn	Val	Glu	Ile	Gly	Asn	Pro	Thr	Tyr	Lys	Met	Tyr	Glu	Gly	Gly	Glu
465				4470					4475						4480
Pro	Asp	Asp	Val	Gly	Gly	Leu	Leu	Asp	Ala	Asp	Phe	Ala	Leu	Asp	Pro
			4485					4490					4495		
Asp	Lys	Pro	Thr	Asn	Phe	Thr	Asn	Pro	Val	Tyr	Ala	Thr	Leu	Tyr	Met
		4500					4505						4510		
Gly	Gly	His	Gly	Ser	Arg	His	Ser	Leu	Ala	Ser	Thr	Asp	Glu	Lys	Arg
		4515				4520					4525				
Glu	Leu	Gly	Gly	Arg	Gly	Pro	Glu	Asp	Glu	Ile	Gly	Asp	Pro	Leu	Ala
4530					4535					4540					

FIG. 14B